A Clinical Lecture

ON

A QUIET EFFUSION INTO THE KNEE-JOINTS OCCURRING IN WOMEN AND YOUNG GIRLS.[1]

Delivered at St. George's Hospital

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GENTLEMEN,—I am anxious to-day to call your attention to a very interesting condition of the knee-joint about which I do not think there is anything to be found in your text-books; it is, however, not uncommon, and as it is from a practical point of view of importance it is naturally worthy of some consideration. The condition is, so far as I can judge, one of passive effusion into the joint; it rarely occurs in any other joint than the knee, although I have seen it on one occasion in the ankle. The joints of the opposite sides are usually involved at the same time, but the effusion is, as a rule, much more marked on one side than on the other, that on the right side being generally the greater. There is rarely any pain unless some injury has been received; beyond a feeling sometimes of weakness there is nothing to attract attention to the matter—indeed, a considerable percentage of those who suffer from the complaint are unaware of its existence unless attention is called to it accidentally. It is limited to girls and women and is always associated with menstrual irregularity or uterine trouble. It occurs mainly at two periods of life—viz., at the time of puberty, when the catamenial affairs are establishing themselves, and at the climacteric time when menstruation begins to cease. It may, however, occur at any intermediate period if there is menorrhagia, excessive hæmorrhage from the uterus, or great irregularity and difficulty in connexion with the menstrual affairs.

My attention was first attracted to this affection some years ago when I met with several cases of painless and unnoticed effusion into the knee-joints of girls of 12 and 13 years of age; and I found upon examining a number of girls who were attending as out-patients at St. George's Hospital that a certain number had painless swellings of the knees of which they and their parents were unaware. In all these cases there was delayed onset of menstruation. Upon inquiry it was found that in some of them, although neither the children nor their parents were aware of anything being wrong, the children tired easily and in some cases were prone to fall down or "double" up without any obvious cause. The character of the joint is peculiar; although containing a considerable amount of fluid it is never tense excepting after superadded injury. The fluid, if the patient is standing, sinks to the lower part of the joint cavity and sometimes leads to a pouch-like overhanging of the synovial membrane at its lower anterior aspect.[2] In the older subjects the aspects of the condition are similar, the main points being the absence of tension and heat and the freedom from pain. The patients are usually anæmic but not invariably so.

As already mentioned, the common cause of the discovery of the condition is an injury, generally very slight, such as a twist or fall; the occurrence of an injury and the existence of effusion naturally lead to a diagnosis of traumatic synovitis, which being apparently of a very chronic nature and occurring in subjects of a delicate type is sometimes mistaken for tuberculous disease, a mistake of some importance. Any error in diagnosis can usually be avoided by noticing the character of the swelling, the existence of effusion on both sides (that on the uninjured side being painless and without heat), and the coincidence of marked menstrual or uterine trouble.

In accordance with my usual custom in these lectures let me bring to your notice the following practical illustrations of the condition of which I am speaking, because, as I have often mentioned to you before, a characteristic case of any kind affords a much more perfect picture of the true aspect of things than abstract descriptions, even if they be perfect in their way.

CASE 1.—A girl, aged 14 years, was brought to me who a few months previously whilst walking across the room had knocked her knee against a chair. She complained of nothing at the time of the injury, but on the following day, as she seemed to walk a little lame, her mother noticed that the right knee was held rather stiffly. Upon examination she found it swollen but not tender. Professional advice was sought and effusion into the knee was diagnosed. The usual treatment by rest was adopted for some weeks without any material benefit. Further advice was therefore taken, a somewhat grave opinion being expressed in respect to the possibility of the case being tuberculous, and I was assured that this opinion was given without a previous examination of the opposite knee. Whether this was really so or not I cannot of course say, but at all events further treatment on the lines previously adopted produced no good result. Later I saw the patient with her medical attendant and upon investigation found that both knees contained a good deal of fluid; neither joint was tense but on the contrary was rather flabby; there was no pain or tenderness; the local temperature on the side which had been injured was, however, certainly rather more than on the other. The girl was anæmic and of a delicate aspect. She had not yet menstruated, but certain pains and symptoms of irritability clearly indicated that menstrual developments were tending to come about. Under the circumstances, judging by my previous experience of similar cases, I ventured to predict that the trouble would subside upon the establishment of the catamenial function and advised the discontinuance of rest and splinting, which had made the injured joint already somewhat stiff, substituting exercise and massage, with as much fresh air as possible. The menstrual affairs, although much delayed, occurred later with great profusion. From the moment of the onset of the catamenial discharge improvement commenced and at the end of a fortnight after the second catamenial period the knees were both entirely normal and remained so subsequently.

CASE 2.—A well-developed woman, aged 24 years, met with a slight injury to one of her knees. She took little notice of the injury, but on the following day, upon getting up in the morning, she noticed some stiffness in the injured knee, and upon examination found it swollen. For a fortnight, as the discomfort was but slight, no further attention was paid to the matter, but then, as the swelling persisted, a surgeon whose name were I to mention it would be a sufficient guarantee of his capacity was consulted. He took a rather serious view of the condition and urged immediate splinting of the part and rest in bed for at least a month. As the patient was one of those people who live in the open air—hunting, golfing, &c.—this recommendation was regarded with dismay, especially as beyond the swelling little or no discomfort was present. She was then brought to me as an alternative opinion. Upon examination the left knee was considerably swollen from effusion; it was not tense. In the erect position the synovial membrane tended to drop forwards and to overhang the part below the joint. Beyond a feeling of slight stiffness, which was not enough to produce anything like a noticeable limp, the symptoms were negative. The opposite knee also contained fluid which, although not obvious when the patient was sitting in a chair, became at once manifest in the standing position. This knee had received no injury nor was the patient aware of the existence of the fluid; indeed, she was certain that the injured knee was also free from fluid before the injury, this being clearly an error on her part. Upon inquiry it appeared that her menstrual affairs had always been irregular and very painful and at the time of her coming to see me she had not menstruated for two months, although at the last normal date she had felt ill and irritable and suffered from distressing bearing-down pains. Judging from the general aspect of the case I came to the conclusion that it was one of the kind now under observation. I therefore felt compelled, in spite of the opinion already given, to oppose the use of splints and rest in bed, the latter of which seemed to me

[1] The Lecture is published as it was delivered excepting the omission of some elementary details which would here be superfluous.

[2] It may be pardonable to remark here that a small quantity of fluid in the knee-joint which when the joint is flexed or if the patient is lying down can only be detected by very expert observers becomes quite obvious on placing the patient in the standing position.

likely to be extremely disadvantageous to a patient of such habits and disposition as this one possessed. I therefore recommended massage, moderate exercise in the open air as much as possible, and the resort to some obstetric authority with a view to the rectification of the menstrual defects. Two opinions so exactly opposite naturally necessitated the reference of the case to a third surgeon, a man of eminence and great discretion, who, adopting very wisely a strictly judicial attitude, declined to commit himself unreservedly to either view, but went so far as to say that confinement to bed in a temperament like that of the patient was to be avoided if possible. The treatment on the lines of my opinion was therefore adopted, and with the onset of regular menstruation, which happily followed a little later, the knee trouble entirely disappeared, although it recurred temporarily before two successive menstruations.

CASE 3.—This patient was in St. George's Hospital under the care of Dr. W. R. Dakin. She was a married woman, aged 26 years, who was admitted on July 8th, 1898. Since her first confinement, six years previously, she had suffered at menstrual times from great abdominal pain. The catamenia had been extremely profuse and exhausting. For two or three years she had been continually ailing, and latterly any attempt at getting about or doing her ordinary work caused intense malaise. For 18 months the knees had been "stiff and hot" before the menstrual times, but she had noticed no swelling either of the knees or of the legs. On admission the patient was found to be anæmic and she seemed ill. There was tenderness over the right ovary on deep pressure. The right knee, she said, was stiff and uncomfortable. There was considerable effusion in the joint which was, however, flaccid—not tense; there was neither tenderness nor any increase of local heat. The limb below was perfectly normal. The opposite knee contained also a little fluid. On July 16th the effusion in both knees had subsided a little; on the 18th it had increased considerably; and on the 19th profuse menorrhagia with large clots and much pain occurred. Considerable hæmorrhage continued, being profuse until the 27th when it diminished somewhat. The effusion in the knees during this time rose and fell from time to time; sometimes it was slight, sometimes great, but at no time did the joints on either side become tense nor was any other joint than the knee involved. On August 8th the uterus was curetted; on the 10th all hæmorrhage ceased, and by the 19th both knees were perfectly normal. The patient reported herself for examination on Oct. 1st and she was then perfectly well; the knees had given no trouble of any kind and upon examination they were found to be normal in all respects. A more conclusive case than this it would be difficult to find.

CASE 4.—A married woman passing through the climacteric period wrenched her right knee in getting out of a cab. The injury was very slight and she thought nothing of it until the following day, when on rising from her bed in the morning she found the knee a little stiff and upon inspection saw that it was considerably swollen. She therefore sought advice. On examination the knee was found to be swollen and it contained a considerable amount of fluid; the joint was not in any sense distended—on the contrary, the capsule was rather flaccid; the fluid in the standing position gravitated to the lower and anterior aspect of the joint, causing some slight "sagging" of the kind which I have previously referred to. The other knee contained almost as much fluid and presented the same characteristics as the injured joint. Of the existence of anything abnormal on the uninjured side the patient was entirely unaware until it was pointed out to her. On inquiry she then stated that the "change of life" had commenced about six months previously, and at times very free loss of blood had happened; after these considerable losses she now remembered that she generally felt very tired upon much exertion, and that on two occasions she had felt a tendency when walking for her knees to "give way." Of this she thought nothing, as she attributed it merely to weakness from pain and loss of blood. She was kept under observation, and during the whole of the climacteric period, which extended over about 18 months, the knees contained fluid, sometimes a little and sometimes quite a large quantity. The increase in quantity usually, but not always, followed increased pain or extra blood flow. The fluid could be almost entirely removed at any time by a week's massage, but it immediately recurred upon the cessation of the treatment. At the end of the climacteric period both joints became normal, and they have never shown any indication of recurrence of the effusion since. The noteworthy points in this case, as in the others, are: (1) the escape of the condition from observation until attention had been attracted to it by injury; (2) the almost rhythmical rise and fall in the quantity of the effusion; (3) the absence of tension in the joint which was replaced by the peculiar flaccidity; and (4) the spontaneous return to the normal state upon the subsidence of the uterine irregularities.

It is hardly necessary to weary you with descriptions of further clinical examples excepting one (Case 5) very briefly in order to show how important a knowledge of these cases may be.

CASE 5.—The patient was a girl, aged 14 years, who was suffering from the troubles which sometimes arise at that period of life from delayed or painful menstruation. After a slight injury the right knee was found to be swollen considerably. Prolonged splinting with complete rest failed to affect the condition in any noticeable way; the child, on the other hand, began to fail in health from confinement to the house and want of exercise. It was then found that the opposite knee contained fluid in considerable quantity, and it was thought that this effusion in the hitherto sound knee was sudden. The onset of the menstrual period was imminent; the knee was rather hot to the touch, and the temperature was 101° F.; at times the girl felt "shivery" but had no actual rigor. The question therefore arose as to the possibility of the apparently sudden effusion into the knee being a secondary pyæmic condition or something of that kind. There appeared to me no doubt, however, that the case was one of the sort under discussion and that the febrile and general disturbance was merely due to catamenial causes. The case was treated on this supposition; splints were omitted, massage and exercise in the open air as much as possible being substituted. Immediate improvement followed and with the gradual spontaneous rectification in the menstrual irregularities, which ensued in the course of 18 months, the knee trouble entirely disappeared. It is obvious in this case that the knowledge of the occurrence of these conditions was of vital importance for the proper treatment of the patient.

I am unfortunately unable to say how many cases of effusion into the knees of this kind I have seen, for of the earlier cases I kept no memoranda; during the past four years, however, I have seen 20 typical examples in all of which the trouble had been attributed to wrong causes. In three cases I withdrew fluid from the knee by means of an exploring needle; in two of these the fluid was ordinary synovia, in the other it contained a considerable amount of blood. Whether this was an accidental occurrence or whether it had any pathological bearing upon the mechanism of the effusion I cannot say. In only one case have I seen the effusion occur in any other joints than the knees; in the exception mentioned effusion occurred into the left ankle in a very rheumatic subject. The causes assigned for the condition were in order of frequency, injury, tubercle, rheumatism, hæmophilia, and "blood poisoning." In no case did recovery occur when the uterine or catamenial irregularities continued; in every case, on the other hand, so far as my memory serves me, correction of these irregularities, whether spontaneously or by treatment, was followed by complete disappearance of the tendency to effusion into the knees.

Some of you may at this stage naturally begin to speculate as to the practical bearing of these cases which I have related. The practical bearing of the cases is of much moment in diagnosis, treatment, and prognosis. First, with regard to—

Diagnosis.—When called upon to examine a case of a woman or girl suffering from painless effusion into the knee, especially if she be at the period of the onset of the catamenial flow—i.e., from the ages of 11 to 14 years—or at the climacteric, never omit to inquire into the state of the uterine functions, and never omit the ordinary surgical routine of examining both knees although the patient may ascribe the effusion to a distinct injury of only one of them. If there be the functional irregularities to which I have referred you will as a rule find fluid in both knees, generally in excess on the right side, and although the patient may be convinced that the condition is due to recent injury it may be concluded for purposes of treatment that the injury is only an incident which has called attention to the effusion, but that it is not primarily responsible for it—in other words, that the case is one of the kind which we are considering. In the absence

of catamenial irregularity or uterine disorder some other reason must, on the other hand, be sought for the local condition.

Treatment.—In the matter of treatment a correct interpretation of these cases is of vital importance, especially in young subjects in whom the chronicity of the condition and the ofttimes delicate aspect of the patient suggest tuberculous disease if the attention be too much concentrated on one knee only, and may lead to a treatment by splints and complete rest which in the catamenial and uterine cases is the very worst for adoption and should be rigorously avoided. The primary treatment should be directed to the correction of the faulty functions, whilst moderate exercise and massage for the knees, combined with the healthiest of outdoor lives, are collateral indications—beyond everything, splints of any kind should be avoided, and on no account should the patient be allowed to lead an invalid's life unless the loss of blood, pain, &c., render this absolutely unavoidable. In the absence of acute symptoms arising from injury the condition of the knees need lead to no restriction in the exercise of an ordinary person.

Prognosis.—The prognosis in these cases, if treated on the lines indicated, is always good, provided that the primary cause of the effusion can be cured, in which case recovery invariably follows unless the condition has persisted so long as to produce permanent changes in the joint. If the primary condition proves intractable the effusion will occur continuously or recurs at intervals. In cases where the effusion is continuous or is constantly recurring an increasing weakness of the knees occurs and in the later stages, when the health becomes broken down by frequent loss of blood or great pain, œdema of the legs sooner or later follows, but in this there is no specific meaning since it is merely the result of continual exhausting illness.

Such, gentlemen, are the main points in connexion with this interesting condition to which I am anxious to direct your thoughts. So far as I know the affection is not one which is commonly recognised, although, of course, it may be well known to some people. Since, however, a well-known obstetric physician assured me some time since in conversation that the subject was new to him I presume that it cannot be altogether familiar to the generality of us. This amongst other reasons must be my excuse for occupying so much time to-day in considering the matter.

Note.—Since the delivery of this lecture the following striking case amongst others has come under observation. A woman, aged 47 years, had up till quite recently been menstruating with exceptional regularity; she had always been in good health and very active in her habits, taking much bicycle and walking exercise. The last two "periods" had been very profuse and were followed by an almost continuous flow which was very obstinate to treatment. A short time before the case came under my notice the nurse in charge of the case called attention to the existence of swelling of both knees. The patient was anæmic and at times lost much blood; both knees were swollen from effusion, the joints being baggy—not distended; there was neither local heat nor tenderness—indeed, beyond a feeling of weakness nothing abnormal was complained of by the patient. The well-marked point in this case was the singular way in which the effusion rose and fell in relation to the occurrence of the uterine hæmorrhage. The greater the loss of blood the greater was the amount of effusion in the knees. Upon the cessation of the hæmorrhage for a few days the effusion would almost disappear only to reappear in the usual quantity with the recurrence of the uterine flow. In this case as usual the effusion was confined to the knees. At the termination of the climacteric the knees recovered spontaneously and have given no sign of trouble since.

TORQUAY HOSPITAL AND PROVIDENT DISPENSARY.—The fifty-seventh annual report of this institution shows that during 1900 the in-patients numbered 389, against 359 in 1899, and that 692 out-patients were treated compared with 518 in the previous year. This is exclusive of 591 patients who were treated in the ophthalmic department. In the provident dispensary 196 new members were admitted and 228 were removed from the books. The financial statement showed that the expenditure amounted to £2246, and the income from all sources was £1938. A special appeal has been made for funds, with the result that £324 have been already received.

Three Lectures
ON
THE SURGERY OF PREGNANCY AND LABOUR COMPLICATED WITH TUMOURS.

Delivered at the Medical Graduates' College and Polyclinic on Jan. 11th, 18th, and 25th, 1901,

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LECTURE III.[1]

Delivered on Jan. 25th.

PREGNANCY COMPLICATED BY CANCER OF THE NECK OF THE UTERUS; TUMOURS OF THE PELVIS; MISPLACED VISCERA; SEQUESTERED AND QUICK EXTRA-UTERINE FŒTUSES.

GENTLEMEN,—We will begin this lecture with the consideration of what to my mind is the most appalling of all the complications of pregnancy—namely, cancer of the neck of the uterus. One of the most significant clinical features in regard to cancer of the neck of the uterus is the fact that it is almost exclusively confined to women who have borne at least one child. In 100 women with cancer of the cervix which I carefully investigated in regard to this point there was only one exception, and she was married. Even in this case a miscarriage could not with certainty be excluded. Czerwenka has recorded an interesting observation bearing on this subject. A woman, 35 years of age, had a double uterus with cancer of the left cervix. This uterus was removed by panhysterectomy. The vagina was double; coitus was practised in the left half. The left cervix had become cancerous, the corresponding uterine body contained two small fibroids, and the left Fallopian tube had become a pyosalpinx.

It is somewhat difficult to understand how a woman with cancer of the uterus can conceive, but it is quite certain that it happens, and even when the disease is well advanced; further, it is by no means easy in the early stages to detect the complication, because in many cases cancer of the cervix leads to enlargement of the uterus. Dr. Playfair exhibited a uterus at the Obstetrical Society of London in which he had performed vaginal hysterectomy for cancer of its neck, and to his astonishment he found that it contained an embryo of the second month.[2] I feel convinced that in some cases cancer of the neck of the uterus grows more rapidly than some of us realise, and it is not beyond the bounds of reasonable probability that this woman's cervix was healthy at the time she conceived, and the amount of diseased tissue present at the time of operation represented two months' growth. It is consistent with what we know of the growth of cancer in the breast, for in this situation carcinoma increases with extreme rapidity during lactation. Judging from my own observations I think that cancer of the neck of the uterus is not an uncommon complication of pregnancy, but I believe that cases in which uterine cancer offers obstruction to delivery are rare, and this for two reasons: cancer of the neck of the uterus predisposes to abortion, and when it has advanced to such a stage as to occupy the vagina with an obstructive mass the effect of it upon the patient is such as endangers and ofttimes kills the fœtus. Indeed, it may be laid down as a principle that when considering the question of Cæsarean section upon a woman with cancer of the cervix the intending operator should first satisfy himself that the child is alive. The following case not only illustrates this fact but will serve to demonstrate that it is a fortunate circumstance that in many cases in which this dreadful combination of cancer of the cervix and pregnancy exists that there is a great tendency for abortion to occur. A

[1] Lectures I. and II. were published in THE LANCET of Feb. 9th (p. 382) and 16th (p. 452), 1901.
[2] Transactions of the Obstetrical Society, vol. xxxvii., p. 196.

poor woman about seven months pregnant was admitted into the Chelsea Hospital for Women with the hope that I would perform Cæsarean section. On examination the extensive nature of the cancer clearly barred any operative measures for its relief, and although there could be no doubt that the uterus was gravid there existed a good deal of doubt about the vitality of the fœtus. I decided to watch the case and await events, and if we obtained clear evidence that the child was viable we could then take steps for deliverance unless miscarriage happened, and there were threatenings of such an event. About five days later abortion occurred and a dead, shrivelled fœtus escaped from the uterus. There was very little bleeding and in due course the uterus settled down and eventually the woman returned to her home and died some month later.

Now and then it will happen that such cases urgently demand surgical treatment and the surgeon will have to exercise his mind as to the best method of dealing with the complication. I was on the horns of this dilemma in 1899 when a woman, 33 years of age, and mother of several children, was transferred from Queen Charlotte's Hospital to the Chelsea Hospital for Women under my care. The poor patient was eight months advanced in pregnancy and had extensive cancer of the neck of the uterus. It surrounded the vaginal portion of the cervix like a ring, but did not invade the vaginal walls or infiltrate the broad ligaments. Although the conditions as to remote results were not too propitious operation was possible and the immediate outlook was not too bad. The case was the subject of a very anxious consultation and there were three courses suggested: (1) induce labour and remove the uterus after the puerperium; (2) amputate the cervix and let labour follow; and (3) abdominal panhysterectomy. I deliberately chose the third course, as it would enable me to rescue a viable child and at the same time remove the cancerous uterus. The operation was carried out in the following way: the patient was etherised and the abdomen was freely incised in the middle line. The broad ligaments were clamped with forceps and cut; the uterine arteries were exposed and clamped and the uterus with its contents was cut away from the cervix and handed to an assistant. Thus whilst I was occupied in securing the vessels an assistant opened the uterus and extracted the child. This is as far as I know the first record of a child being delivered alive from a uterus detached from its mother. Having secured the vessel I then removed the cancerous cervix, having taken the precaution to protect the intestines by sterilised towels. The vaginal edges were sutured and the peritoneum closed over it, and the abdominal incision secured as usual. The patient did not rally well from the operation and paresis of the intestines supervened and she died on the fourth day. The child flourished well during many days in an incubator; then he began to waste and died when about 14 days old.

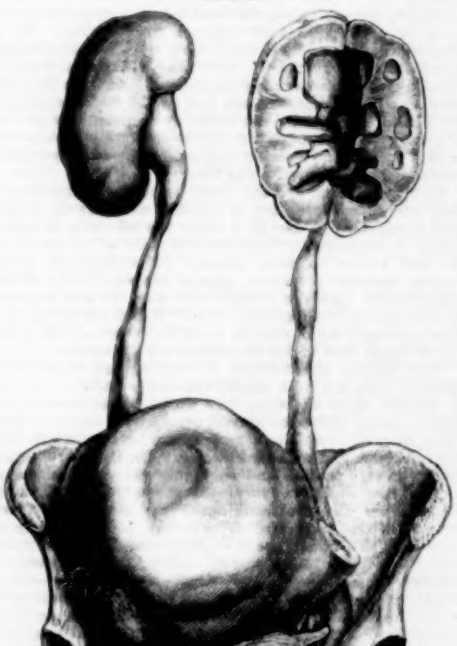
It occasionally happens that even when the child is dead cancer may induce such changes at the neck of the womb as to render surgical interference indispensable. In 1891 a woman, 35 years of age, mother of six children and known to have cancer of the neck of the uterus, was taken in labour. Until the onset of "the pains" no one suspected pregnancy. On examination a hard cancerous infiltration of the cervix was found and the umbilical cord had prolapsed and ceased to pulsate. The woman was admitted into the Middlesex Hospital; 48 hours later Dr. W. Duncan performed Cæsarean section and extracted a dead and putrid child with its placenta. The patient died 41 hours after the operation.[3]

A study of the literature, which, by the way, chiefly consists of isolated records of cases, indicates that the course usually followed when pregnancy, complicated with cancer of the cervix, goes to term is to perform Cæsarean section, especially as the cancer is, as a rule, too extensive to permit radical surgical measures. When the cancerous condition of the cervix is detected before the mid-period of gestation it would be desirable to empty the uterus and perform vaginal hysterectomy if the disease is not so extensive as to preclude the hope of a successful issue. On the other hand, when cancer of the cervix is detected in the late stages of pregnancy the cervix may be removed without disturbing the pregnancy. In one successful case, performed in the seventh month, pregnancy went to term and labour occurred naturally. A year later there was extensive recurrence (Wallace). A study of the records indicate that the best operative results have followed radical operations by the vaginal route.

Cancer of the rectum and pregnancy.—Of this unusual complication and obstruction to delivery I only know of one example. The patient was in the Middlesex Hospital Cancer Wards, under the care of the late Mr. J. W. Hulke in 1894, for cancer of the rectum for which colotomy had been performed. On admission the patient was found to be pregnant, "and when the full time came that she should be delivered" Mr. Hulke transferred the patient to the ward for the diseases special to women, and Dr. Duncan successfully performed Cæsarean section.[4]

Tumours of the pelvic bones.—Among the rare obstructions to labour must be reckoned tumours of the pelvis other than those which arise from the uterus, ovary, or Fallopian tubes. In the text-books of midwifery a chondroma arising from the pelvic bones is nearly always mentioned; it is an extremely rare tumour independent of pregnancy and when it complicates this condition it offers a formidable obstruction to delivery. The remarkable effects which such tumours produce on the pelvic viscera are shown in Figs. 7 and 8, taken from a specimen in the museum of University

FIG. 7.



Pelvis with a large chondroma arising from the sacrum and complicating pregnancy at term. (Museum of University College, London.)

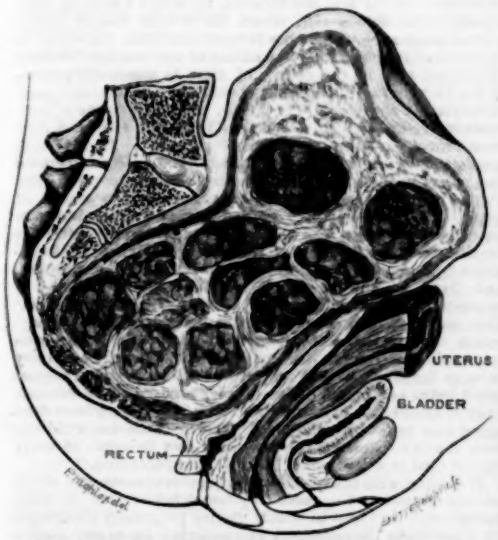
College, London, obtained from a woman, 21 years of age, who was admitted to the hospital in 1893 in labour. The patient came under the care of Dr. Herbert Spencer who performed hysterectomy and saved the life of the child. The mother died on the ninth day after the operation. The parts concerned are shown in sagittal section; it will be seen that the tumour is intimately connected with the third, fourth, and fifth sacral vertebræ and that it has utilised all the available space in the true pelvis and has displaced and compressed the rectum, vagina, and

[3] Middlesex Hospital Reports, 1891, p. 159.

[4] Middlesex Hospital Report, 1893, p. 215.

urethra against the pubes. The ovoid shape of the tumour, and in consequence its elliptical outline, is characteristic of all tumours which mould themselves in the true pelvis—e.g., the pelvic segments of large ovarian cysts and cervical fibroids and the head of the fœtus after a long labour. The most lethal effect of the tumour even more than the obstruction it offered to delivery is the insidious change it produced on the ureters, for both were dilated and the pelvis of each kidney contained pus. A perusal of the clinical post-operative history indicates that she probably died

FIG. 8.



The pelvis in the preceding drawing in sagittal section. The dark patches are spurious cavities due to softening of the cartilage.

in consequence of the great disorganisation of the kidneys. The tumour is a chondroma, part of which has ossified; it has a firm fibrous capsule. The spaces in the tumour are spurious cavities due to myxomatous changes in its tissue. This woman was known to have a tumour in her pelvis seven years previously to her tragic death. The structure of the tumour is consistent with such a history.

A somewhat similar though not so severe a case was placed under my care in the Chelsea Hospital for Women by Dr. W. H. Fenton. The patient, a married woman, 32 years of age, mother of two children and five months pregnant, was found to have a tumour in the pelvis which so narrowed the outlet that delivery by the natural channel would be an impossibility. On careful examination the tumour was thought to be an ovarian dermoid incarcerated in the pelvis and it was decided that an attempt should be made to perform ovariotomy. There were other features in the case which demanded consideration; the urine contained albumin (about one-half) and the uterus was so large as to raise the suspicion of hydramnion. The general aspect of the patient was not good. However, the case demanded surgical intervention and I performed cœliotomy; instead of an ovarian dermoid I found a large, hard, solid tumour growing from the anterior face of the coccyx and lower sacral vertebræ extending almost completely across the pelvis. I had no alternative but to perform hysterectomy, although this was a serious operation in view of the albuminuria. Fortunately, the patient made one of the most rapid recoveries I have ever known after hysterectomy and she left the hospital convalescent in 14 days. She reported herself at the end of three months and an opportunity was taken to examine the urine; the amount of albumin had not altered. We kept in touch with the patient and learned that she died two years after the operation from pneumonia.

Post-rectal dermoids.—In considering pelvic tumours it is well to bear in mind that dermoid tumours may occupy the hollow of the sacrum behind the peritoneum and the rectum and be absolutely independent of the ovaries; this is proved by the fact that they occur in men as well as in women. A case was carefully observed in the Royal Infirmary, Newcastle-on-Tyne. The patient, a woman, 49 years of age, was under the care of Mr. Frederick Page and he removed the tumour through the perineum by means of a transverse incision between the anus and the coccyx. He extracted the pultaceous matter with a spoon and then enucleated the wall of the dermoid. The woman recovered. The contents of the tumour weighed three pounds; its walls were furnished with hair and the tumour resembled a pumpkin in contour and in size. The best-known example of a post-rectal dermoid in a man is recorded by Ord. I collected all the records of post-rectal dermoids I could find and drew attention to them in my book on "Tumours." The latest contribution to this subject is an article by Skutsch,[5] and he gives an account of two cases under his own care in women. One of them is especially interesting in association with the subject of this lecture because the patient, a woman, 28 years of age, was pregnant at the time she came under observation. This woman had had three children previously and a miscarriage. At the time she came under Skutsch's care she was five months pregnant and had difficulty with the bladder and rectum. He succeeded in evacuating the cyst contents through a transverse incision in the perineum. The tumour extended as high as the pelvic brim and he succeeded in extracting a portion of the wall and draining the cavity. The mother recovered from the operation, the pregnancy was not disturbed, and she was delivered at term without difficulty. The cyst wall was carefully investigated microscopically and determined to be dermoid.

Kidney in the hollow of the sacrum.—It is necessary for a tumour to be composed of very substantial tissues to offer an effective bar to delivery, and, as I pointed out in dealing with ovarian tumours incarcerated in the pelvis by a gravid uterus, in the majority of instances those which proved the most formidable were in nearly all instances dermoids. I am cognisant of one case in which a kidney occupied the hollow of the sacrum and did not oppose delivery, and in its turn the passage of the fœtus does not appear to have affected it injuriously. The facts of the case are not without interest. The patient, a woman, aged 33 years, was known to have a painful swelling behind the uterus and of a character which suggested a distended Fallopian tube. Cœliotomy was performed by Dr. Heywood Smith, and when the parts were exposed we found the uterus to be of the unicorn variety and to possess one Fallopian tube and a well-developed ovary on the right side. The left side of the uterus was smooth and rounded and lacked a broad ligament ovary and Fallopian tube and anything representing the left round ligament. Knowing that this malformation of the internal genital organs is usually associated with defective development or misplacement of the kidney, corresponding to the defective half of the uterus, I was allowed to make a careful examination of the renal organs. The right kidney occupied its proper position; the left one lay in the hollow of the sacrum behind the peritoneum and proved to be the body which we had recognised behind the uterus and thought to be an enlarged Fallopian tube or ovary. The abdominal incision was closed and the patient made an uninterrupted recovery. About 14 months afterwards the patient conceived and had the satisfaction of being delivered easily at full term of a fine child.[6]

Many years ago I prepared a specimen of a kidney occupying the hollow of the sacrum and placed it in the museum of the Middlesex Hospital (Fig. 9). The parts were obtained from a man, and at the time I drew attention to the fact that a kidney in such a situation in a woman would constitute a clinical puzzle. It is a remarkable fact that within the space of three months I received for examination and report two kidneys removed from the hollow of the sacrum by the same operator from women. One of these kidneys was hydronephrotic. Thus I have knowledge of four cases in which the kidney was a pelvic organ, three in women and once in a man. In one of the instances it was associated with pregnancy and an unimpeded delivery.

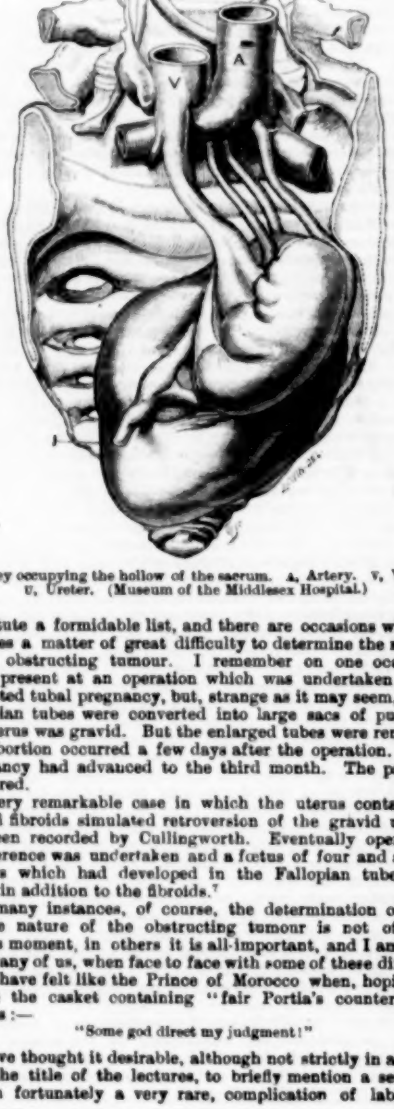
The spleen.—One of the rarest complications of pregnancy among the class we are considering is an enlarged and moveable spleen. In May, 1900, a woman, 34 years of age, mother of seven children and two months pregnant, was

[5] Zeitschrift für Geburtshulfe und Gynäkologie, Band xl., 353.
[6] THE LANCET, April 16th, 1898, p. 1051.

placed under my care on account of a very mobile, painful, and troublesome swelling in the left iliac fossa, which furnished the physical signs and possessed the shape of a spleen. I performed cœliotomy and the diagnosis proved correct; the spleen was removed and the patient made a quick and uneventful recovery. In December the child was born and the mother reported herself in excellent health notwithstanding that she lacked a spleen. The full details of this case will be found in the Transactions of the Clinical Society of London, vol. xxxiv., p. 26. I have not been able to find another record of splenectomy during pregnancy.

A little reflection on the subject of these lectures makes it clear that tumours which may complicate pregnancy

FIG. 9.



Kidney occupying the hollow of the sacrum. A, Artery. V, Vein. U, Ureter. (Museum of the Middlesex Hospital.)

constitute a formidable list, and there are occasions when it becomes a matter of great difficulty to determine the nature of an obstructing tumour. I remember on one occasion being present at an operation which was undertaken for a suspected tubal pregnancy, but, strange as it may seem, both Fallopian tubes were converted into large sacs of pus and the uterus was gravid. But the enlarged tubes were removed and abortion occurred a few days after the operation. The pregnancy had advanced to the third month. The patient recovered.

A very remarkable case in which the uterus containing several fibroids simulated retroversion of the gravid uterus has been recorded by Cullingworth. Eventually operative interference was undertaken and a fœtus of four and a half months which had developed in the Fallopian tube was found in addition to the fibroids.[7]

In many instances, of course, the determination of the precise nature of the obstructing tumour is not of any serious moment, in others it is all-important, and I am sure that many of us, when face to face with some of these difficult cases, have felt like the Prince of Morocco when, hoping to choose the casket containing "fair Portia's counterfeit," he says:—

"Some god direct my judgment!"

I have thought it desirable, although not strictly in accord with the title of the lectures, to briefly mention a serious, though fortunately a very rare, complication of labour—namely, the presence of a fully-developed extra-uterine fœtus in the pelvis. I am persuaded to do this because on one occasion a solid ovarian tumour incarcerated in the pelvis by a gravid uterus led the physician in charge of the case to regard it as an extra-uterine child; also because a sequestered extra-uterine fœtus constitutes in some conditions a very formidable obstruction to delivery.

Labour complicated with sequestered and with "quick" extra-uterine children.—It is a well-established fact that uterine and tubal pregnancy may run concurrently and both go to term; this may be described as the most dangerous combination to which child-bearing women are liable. The particular form of this combination to which I wish to draw especial attention is that where the woman has an extra-uterine pregnancy which goes to term and then the fœtus is sequestered in the pelvis. The nature of the case has not been recognised and in the course of time is almost forgotten. It is a fact that a woman with a fœtus thus sequestered may subsequently conceive in her uterus. Stonham made a post-mortem examination on a woman, 43 years of age, who died from bronchitis when seven months pregnant. In the right mesometrium he found a sequestered fœtus partly macerated and partly in the soapy condition known as adipocere. The uterus contained a fœtus at about the seventh month of gestation.[8] Leopold has recorded a very remarkable case concerning a woman who had had seven children. After the fourth child she had, according to the evidence, an extra-uterine pregnancy, then three more intra-uterine children, and lived to the age of 70 years; at the necropsy a sequestered fœtus which she had carried 35 years was found.[9] This case, and others which could be quoted if necessary, serves to show that a sequestered fœtus is not necessarily an impassable barrier to the child. To Worrall of Sydney belongs the credit of not only correctly diagnosing a sequestered fœtus as a complication of pregnancy, but he successfully removed the extra-uterine fœtus which had been dead about two years by cœliotomy. The intra-uterine child was born the day following the operation, but in spite of every care it died in a few hours. The mother recovered.[10]

In dealing with the question of concurrent intra- and extra-uterine gestation the cases require consideration in three categories. 1. Cases in which uterine pregnancy supervenes on a quiescent (sequestered) extra-uterine fœtus and goes to full term. In these circumstances it may end happily and, as in Leopold's case, be successfully repeated. 2. An extra-uterine and a uterine pregnancy begin simultaneously, but the complication is recognised in the early months and terminated by surgical intervention (Walther, Hermes, Strauss). 3. Uterine and extra-uterine pregnancy running concurrently to term. All the recorded examples of this extremely rare combination have, with one exception, ended in disaster to the mother.

In order to show what a disastrous conjunction a combined intra- and extra-uterine pregnancy is at term, with two "quick" children, I have drawn up a table of some records easily accessible to English readers which plainly shows how deadly it is for the mothers and it also sets forth the fate of the children. To these cases I have added the year of record and it will be seen with satisfaction how rarely this deadly combination runs to term. There is one bright feature disclosed in the table, and that is the good fortune which fell to Ludwig, for he not only had the satisfaction of saving the life of the mother, but the intra- and extra-uterine children were also successfully rescued—a feat in obstetric surgery of which any man may justly feel proud.

Table showing Cases of Concurrent Intra- and Extra-Uterine Pregnancy running to Term, with the Fate of the Mother and Children.

Recorder.	Year.	Fate of mother.	Intra-uterine child.	Extra-uterine child.
Cooke	1863	Died.	Died.	Died.
Sale	1871	,,	Lived.	Lived.
Galabin	1881	,,	Died.	Died.
Wilson	1890	,,	,,	Lived.
Franklin	1893	,,	Lived.	Died.
Ludwig	1896	Lived.	,,	Lived.

[7] Transactions of the Obstetrical Society, vol. xl., p. 285.

[8] Transactions of the Pathological Society, vol. xxxviii., p. 455.

[9] Archiv für Gynäkologie, Band xix., 210, 1882.

[10] Medical Press and Circular, 1891, vol. i., 296.

THE DIAGNOSIS AND TREATMENT OF ABSCESS IN CONNEXION WITH THE VERMIFORM APPENDIX.

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MUCH controversy still exists as to the treatment, operative or otherwise, of cases of appendicitis, but all authorities agree that the presence of pus makes operation imperative. The diagnosis of abscess in connexion with the appendix becomes in consequence one of signal importance. The ordinary signs of pus-formation are no useful guides: a rigor or pus temperature, redness and œdema in the right iliac fossa, or the presence of deep fluctuation, if found, are one and all suggestive of the presence of pus; but these signs are so exceptionally present that if a diagnosis is to be based on them it will seldom be made. A rigor is rare; as a well-marked and remembered sign it has only occurred in three of my tabulated cases. A pus temperature—that is, a temperature low in the morning and high in the evening, followed by night sweats—is the most constant and important of the signs mentioned and is not often absent. Redness and œdema in the right iliac fossa only occur when pus has made its way through the abdominal wall and the abscess is about to open externally, a rare termination. Fluctuation can occasionally be found in neglected abscesses which have been allowed to attain to a large size. It is a fact, and it is of overwhelming importance to know it, that an abscess may be present and all of these signs may be wanting, and that with a large and dangerous abscess the patient may appear to be convalescent. I have notes of four such cases on which I have operated during the past year. The following will suffice as an example.

CASE 1.—A patient under the care of Dr. A. Campbell, Monkwearmouth, was admitted to the private hospital on July 27th, 1900. Ten days previously he had been suddenly seized with acute abdominal pain and vomiting. Similar attacks had troubled him before. He had to go to bed and was feverish and ill for five days, when the pain became localised in his right iliac fossa. During the past five days his temperature and pulse were normal. He regarded himself as convalescent, and he walked from the cab upstairs to his room. When seen there he was dressed and going about and said that he felt well. On bi-manual examination (one hand on the abdomen and a finger in the rectum), a large tender mass was found on the right side of his pelvis. Operation disclosed an abscess containing about three ounces of foul pus and a perforated appendix hanging over the brim of the pelvis.

The two essentials for diagnosis are: (1) the history; that of a sudden severe attack of abdominal pain gradually becoming localised in the right iliac fossa, attended by vomiting and fever, and followed by an abdominal illness; and (2) the discovery of a definite tender tumour, with usually rigidity of the abdominal muscles, in the neighbourhood of the appendix. The diagnosis of appendicular abscess made on these grounds will less often be wrong than any other in abdominal surgery, and every such case should be operated upon.

In a previous series of papers on Appendicitis, published in the *Edinburgh Medical Journal* for March, April, and May, 1897, I drew attention to the clinical importance of the anatomical position of the appendix, and again wish to point out its diagnostic and prognostic significance. For surgical purposes the anatomical positions of the appendix may be described as: (1) on the inner side of the cæcum and pointing upwards into the area occupied by the small intestine; (2) on the outer side of the cæcum, and pointing to the gutter on the outer side of the ascending colon which leads above into the hepatic pouch; (3) below and internal to the cæcum and pointing into the pelvis; (4) behind the cæcum in the sub-cæcal fossa; and (5) behind the ascending colon and resting upon the peritoneum and fascia, or fascia alone, covering the psoas muscle. An appendix in either of these five situations surrounded by a localised collection of pus produces characteristic physical signs by a careful study of which, in the great majority of cases, the position of the appendix and the relations of the abscess can be, and are in my wards, correctly foretold. Such refinement of diagnosis does not meet with great encouragement at the present day, but considering the difference in prognosis of an abscess on the inner and one on the outer side of the cæcum, and the advantage to the surgeon of knowing where to look for the appendix in a difficult case, complete diagnosis must be regarded as a valuable aid both to prognosis and to treatment.

The commencement in the greater number of cases of appendicular abscess is by a sudden severe pain, often waking the patient from sleep in the early morning. (See paper previously mentioned.) The pain at first cannot be definitely localised, but it is frequently referred to the epigastrium; later, it descends to the right iliac fossa and continues there long enough as a rule to prevent the patient from sleeping for two or three nights, it then gradually subsides, leaving marked tenderness behind. The pain is immediately, or shortly, unless in exceptional instances, followed by vomiting and a febrile illness of such severity as to confine the patient to bed for some days. If due importance is not attached to the early history and the presence of an iliac swelling be overlooked, it is not surprising to learn that typhoid fever has been suspected.

The diagnosis of a case which is so acute as to develop an abscess in 24 hours, and a recognition of the appropriate treatment—immediate removal of the appendix—are both easy. It is especially to the more difficult questions of the diagnosis and treatment of the less acute forms that my present paper is meant to draw attention.

1. The position of appendicular abscess inside of the cæcum is indicated in the diagram (see Fig. 1). The walls of the abscess are usually constituted of coils of small intestine and the roof of omentum. When acute tenderness has subsided, such an abscess may be fairly moveable in all directions, and this mobility may raise difficulties in its diagnosis. A small ovarian cyst with twisted pedicle and fixed by adhesions produces symptoms and signs very similar.

2. With an appendicular abscess on the outer side of the cæcum the swelling will be found to commence in the right iliac fossa above the anterior superior spine. As it enlarges it hugs the iliac crest and extends upwards to the ilio-costal space (see Fig. 2). It is quite fixed, and when large makes a definite palpable lumbar swelling. If the appendix in that position happens to be long it reaches upwards into the hepatic pouch, and when inflamed it frequently ruptures at the tip and causes a swelling there, which is generally mistaken for a liver or kidney tumour (see Fig. 3).

3. If the inflamed appendix hangs over into the pelvis, the resulting abscess may be found as (*a*) a limited swelling fixed to the pelvic brim and most readily discovered by bi-manual examination (the hand on the abdomen and a finger in the rectum); or (*b*) the pus may fill the pelvis in varying degree till the recto-vesical or recto-uterine pouch,

FIG. 1. FIG. 2. FIG. 3. FIG. 4. FIG. 5.

distended by pus and roofed over by intestine and omentum, comes to resemble a distended bladder or an ovarian cyst (see Fig. 4).

4. An abscess in the sub-cæcal pouch pushes forward the cæcum, which may be felt gurgling over it, or giving a resonant note on light percussion. This abscess is usually small, occasionally it is a little moveable from side to side, and lies deep in the iliac fossa. It may be confounded with the more chronic and less tender tuberculous or malignant tumour at the ileo-cæcal valve (see Fig. 5).

5. An appendicular abscess behind the ascending colon and lying on the psoas muscle produces a lumbar tumour and flexion of the corresponding thigh (see Fig. 6).

The difficulty of diagnosis in pelvic cases, especially in women, requires special mention. The combination of

ovarian cyst with appendicitis is not rare, and the difficulties of diagnosis are thereby increased. As a typical and not very rare example of this combination I may quote an old case.

CASE 2.—A woman, aged 31 years, a patient under the care of Dr. A. H. Davis, Sunderland, on the evening of April 4th, 1895, felt a pain in the abdomen, but not severe. She took an aperient pill and at 2.30 A.M. was awakened with severe pain. A dose of saline aperient and the application of hot flannels relieved her. In the morning she took a cup of tea, which she vomited. She had hiccough and her bowels were not moved. On the 15th, at 10 A.M., she was seen by Dr. Davis, who found her with a pulse of 80 and a temperature of 100° F., and complaining of general abdominal pain. Her cheeks were flushed, her feet were cold, her knees were drawn up, her mouth was dry, and she was very thirsty. The abdomen was generally tender, but this was most marked in the

FIG. 6.

hypogastrium. An enema given in the evening had no aperient effect, but was followed by intense pain and a feeling of faintness. She vomited once. The temperature was 101·2° and the pulse was 90. There were occasional chills. On the 16th the pain became more definitely referred to the right side of the abdomen, which was swollen, rigid, and tender. On the 17th Dr. Davis found a lump in the right iliac fossa; on the 18th a consultation with Dr. D. Drummond was held, and a pelvic swelling was found in addition to the tumour in the right iliac fossa. I saw the patient first on the 19th (15 days after the illness had commenced). Previously she had always had excellent health: now she was pale and ill-looking; her tongue was red and moist; her pulse was 100, and her temperature was 100°. In the right lumbar region, and extending into the right iliac fossa, a tender, resisting, ill defined swelling was felt. Per vaginam the pelvis was filled with firm exudate fixing the uterus. A temperature chart kept since the beginning of the illness was strongly suggestive of the presence of pus.

Operation was performed on April 20th. The abdomen was opened by an oblique incision in the direction of the external oblique fibres with its centre over the cæcum. The cæcum was found to be glued down over a mass in the right iliac fossa. The pelvic brim was covered by adherent intestines, beneath which a fluctuating swelling was felt filling Douglas's pouch. The intestines above the cæcum were free from adhesion. The abdomen was packed and covered with an antiseptic towel and the patient was placed in the lithotomy position. After vigorous cleansing of the vulva and vagina an incision was made in the posterior vaginal fornix close behind the cervix uteri and about one drachm of purulent fluid escaped. A pair of forceps pushed closed into the opening and drawn out open led to no further result. Between one hand on the abdomen above and a finger in the vagina wound below a cystic swelling could be distinctly felt. The patient was now replaced on her back with an antiseptic towel over the vulva, and the abdominal wound was prolonged backward to the loin and forwards to the middle line, the deep epigastric artery being secured before its division. After separating the adherent intestines the cystic swelling in the pelvis was now seen to be ovarian. It was torn out whole and the oozing bed in which it had been adherent was immediately packed with sponges. The remainder of the abdominal cavity was also packed off with sponges and the separation of the cæcum from the parietes on the outer side undertaken. On tearing through the outer layer of the mesocolon an abscess containing at least two ounces of stinking pus was evacuated. The appendix was searched for by raising the whole of the cæcum from the outer side. It was seen and felt firmly adherent to and flattened on the under surface of the exposed cæcum, where it was left after an attempt to separate it showed that this was unlikely to be accomplished without tearing the intestine. The appendix cavity was sponged dry and carefully packed with iodoform gauze strips, the ends of which were left hanging out from the loin end of the wound. The sponges packing the abdomen and pelvis were next removed and all oozing was found to have ceased. A second cyst was now found in the pelvis and removed. The left ovary and tube were found in their normal position and seemed healthy, though adherent. They were not interfered with. A pair of long clamp forceps were introduced through the abdominal wound down to the opening in the upper part of the vagina, and, guided by Dr. Davis's finger in the vagina, were led outside the vulva, where they were opened and made to seize a thick strand of iodoform gauze, the upper end of which was drawn in so that it just reached into the pelvis, the lower end lying within the vulva. The entire abdominal wound was closed with silk except where the gauze drain and an india-rubber tube were left projecting behind. The first cyst removed was an ovarian dermoid of the size of a cocoa-nut, the second was a parovarian cyst of the size of a turkey's egg. The patient made a good recovery, but 10 months later I had occasion to open a second acute appendicular abscess. Since that time she has remained well.

Further difficulties in pelvic cases are illustrated by the following examples.

CASE 3. *Pelvic appendicitis in a female; pus draining through the Fallopian tube.*—A single woman, aged 27 years, was admitted to the Royal Infirmary, Newcastle, on Sept. 26th, 1894. On the 21st, while in bed, she felt a sudden pain about the stomach and vomited. On the 22nd she took castor oil, which was vomited. An enema administered later brought away some fæcal matter. On the 23rd the pain settled in the right iliac region and she continued to vomit. On the 24th and the 25th she had difficulty in passing urine but her bowels were moved. The pain and vomiting continued. On the 26th she was admitted to the infirmary at 9 A.M. On admission she was flushed, had a coated tongue and a temperature of 100·8° F. and a pulse of 120. The whole abdomen was slightly distended, tender, and rigid. The note over the lower abdomen was dull on light percussion. Per rectum nothing was found. The patient was menstruating and passed through a normal period. After her admission the pain abated, the vomiting ceased, and four days later her temperature became and remained normal. On Oct. 5th, 10 days after her admission, as a pelvic swelling was still palpable from the abdomen, she was examined under an anæsthetic. An indefinite firm mass was felt in the left iliac region. Per vaginam the hymen was found to be intact and the vagina virginal. A soft fluid immoveable swelling, apparently of the size of a fœtal head, bulged into and filled the anterior and lateral vaginal fornices. The bladder was emptied by a catheter and the swelling found to be entirely in front of the uterus. This was confirmed by the uterine probe. On withdrawing the uterine probe some fœtid pus escaped from the cervical canal. The diagnosis suggested was that of suppurating dermoid ovarian cyst ruptured into a Fallopian tube.

Operation was performed on Oct. 10th. The abdomen was opened from the umbilicus to the pubes, when the pelvis was seen to be filled by a mass covered by adherent intestine. The abdominal cavity was packed with sterile gauze and the patient was placed in the Trendelenburg posture. On separating the intestinal coils a large quantity of very offensive pus escaped and was quickly mopped up. The pouch of Douglas was practically a large abscess cavity and the abscess extended upwards into the left iliac fossa. A fæcal concretion was found lying at the bottom of the pelvis, and on drawing the adherent cæcum forward a sloughy opening of the size of a sixpenny piece was found in it at the position occupied by the insertion of the appendix. The whole appendix had sloughed off. The right side of the abscess had been drained by the right Fallopian tube, which was slightly thickened but pervious, and had stinking pus in its lumen. The opening in the cæcum was sutured, the right Fallopian tube was excised, and a large drain opening was made from the bottom of Douglas's pouch into the vagina; the abdominal wound was entirely closed except at the lower end, where a glass tube was left. Cultivations from the gauze drain removed on Oct. 14th, four days after the operation, showed the bacillus coli communis only. On the 18th, eight days after the operation, there was a free discharge of fæcal matter and pus from the vagina, and the temperature rose to 102°. This discharge continued, and on the 24th she was very ill, with a profuse discharge of fæces and pus from the vagina and from the lower part of the abdominal wound, and a temperature of 103° in spite of frequent douching through a tube introduced into the vaginal opening. Constant irrigation was now adopted, and the cavity was flushed through from the vagina to the abdominal wound with sterile hot saline solution day and night. If the irrigator was stopped for a few hours her temperature rose and the irrigator had to be restarted. It was continued until Nov. 9th. She was discharged nearly healed on the 20th. In September, 1900, she returned to have a small ventral hernia, of the size of the drainage-tube, at the lower part of the ventral scar, operated upon. She was in good health, and bimanual examination could discover no sign of adhesions or any other abnormality in the pelvis.

CASE 4. *Pelvic abscesses in a male simulating distended bladder; abscess opened and drained through the abdomen; subsequent rupture into the rectum; sinus persisting.*—A young man, aged 18 years, was admitted to the Royal Infirmary, Newcastle, on May 9th, 1900. He was in good health until 10 days previously, when he was awakened out of sound sleep at 2 A.M. with a severe pain all over his abdomen and vomiting. Since that time he had slept little on account of the pain, had perspired profusely at nights, and had frequently vomited. He had had no urinary trouble. On admission he was slightly jaundiced. His pulse was good (77), and his temperature was 100·2° F.; his tongue was coated with a thick brown fur. The pain came on in paroxysms, making him cry out. His abdomen was enlarged above the pubes by a rounded elastic swelling resembling a distended bladder (see Fig. 4). The bladder was emptied by a catheter, but this made no change in the swelling. Per rectum the pelvic floor was bulged down by a tender swelling which felt like a cyst projecting against the anterior wall and continuous with the suprapubic swelling. Distinct intestinal movements could be felt in the right iliac region.

The abdomen was opened from the umbilicus to the pubes. Some free clear fluid escaped on opening the peritoneum. The intestinal coils in the lower part of the abdomen were congested and matted together with purulent lymph. The cæcum was so covered up by adherent intestine that it was considered to be too dangerous to search for the appendix. The upper portion of abdomen was packed off and the patient was turned over on his side. By separating the adherent intestine above the pubes a large collection of foul pus was tapped and a glass tube was introduced into the cavity and packed round with iodoform gauze. The entire wall of the abscess was formed by adherent intestinal coils. The bladder was protected by adherent small intestine from contact with the pus, hence the absence of bladder symptoms usual in pelvic peritonitis from this or other cause. On May 13th, three days after the operation, he was much better, but still slightly jaundiced. The gauze packing was removed; the discharge from the wound was fæcal. On the 20th his temperature was 102°. He was complaining of abdominal pain and of rectal tenesmus. On the 22nd a distinct soft bulging was felt in the anterior wall of the rectum. The rectal mucous membrane over this was œdematous. He still had tenesmus. On the 23rd it was decided to open the abscess in the recto-vesical pouch through the anterior wall of the rectum and an enema was given. A quantity of pus was passed with this and relief followed. Nothing further was done and he left the infirmary on June 10th in good health, but with a sinus at the lower end of the abdominal wound, which still persists (September).

The importance of bi-manual examination in the male may be illustrated by the following case:—

CASE 5.—A man, aged 41 years, was admitted to a private hospital on June 20th, 1900. He had previously had many slight attacks similar to the present. On June 13th, at 3 A.M., he was awakened by a violent pain, which did not pass off as others had. The following morning he was seen by Dr. McBean, who found his temperature raised. He had vomited, but only slightly. An enema which was administered moved his bowels and gave him considerable relief. He was kept in bed, as the abdomen remained tender in the right iliac region. During the 14th he was a little sick, the pain was less, his bowels were moved, but the temperature continued at 100° to 101° F. On the 15th the question of operation being raised, he was seen in consultation with Mr. W. G. Richardson, who then found him lying in bed comfortably on his back with his legs fully extended. He could move freely in bed; there was no sickness; the tongue was dirty; the temperature was 99° and his pulse was 90. He looked well. In the right iliac region there was a distinctly tender point, but no lump to be felt, and palpation was easy. On the 20th, the day of admission, the patient, a stout, robust man, was not looking so well. The tongue was dirty; the temperature was 100°; there were more local tenderness and rigidity in the right iliac fossa, but no definite swelling. Bi-manually (a finger of the right hand in the rectum and the left hand on the front of the abdomen) a definite tender tumour of the size of a large orange could be felt hanging into the pelvis and fixed to the pelvic brim.

Operation was performed on June 21st. On opening the abdomen the caput cæcum was seen to be adherent low down to the brim of the pelvis with a loop of ileum, which was congested and dilated. The abdominal incision was extended from the back of the ilio-costal space to one inch above the symphysis pubis, the deep epigastric vessels being clamped before their division. The peritoneal and pelvic cavities were then packed off with gauze and an abscess containing gas and stinking pus was easily opened by separating some flimsy adhesions in the angle between the cæcum and ileum. The abscess was cleansed and the appendix was seen hanging over the brim of the pelvis. It was yellow and entirely gangrenous; it only required to be pulled off the cæcum like a slough. The abscess cavity was drained into the loin and packed with iodoform gauze, which was brought out there. The pelvic cavity was drained by a glass tube in the middle line in the inner angle of the wound, in case any infection of the pelvis had occurred before or during the operation. The wound between the drains was entirely closed. Two days after the operation the pelvic tube was removed. On July 18th, a month after the operation, the patient went home with two small granulating sores. Three months later, these surfaces never having been quite healed, he did not feel so well as usual. He was sickly and off his food. When lying in bed he smelt a strong odour and found that warm fluid was trickling down his side. On examination it was discovered that an abscess had opened at the outer angle of the wound, which had been healed for two months, an exit thus being given to about one ounce of pus.

Many patients with appendicular abscess (more than is generally admitted) recover if left alone, and the majority do so by a discharge of the pus into the intestine, the cæcum, or the ileum, close to the ileo-cæcal junction, being the seat of election. The quantity of pus escaping from the abscess may be so large as to be recognisable by anyone when it has been discharged from the bowel, or it may be so small and undergo such changes in its passage as to elude skilled observers. I have on many occasions whilst operating demonstrated the communication between the abscess cavity and the interior of the bowel by passing an instrument into the latter (see Case 6, Case 8, and Case 11).

The discharge of an abscess through the abdominal parietes appears to be usually considered the most ordinary method of spontaneous cure of the abscess, but allowing due deductions to be made for preventive operation it is comparatively rare. Every such case is recognised, but the diagnosis of pus discharging into the bowel can seldom be made on account of the difficulty in its recognition except by operation or by post-mortem examination. I have previously recorded (in the *Edinburgh Medical Journal*) a case in which an appendicular abscess discharged externally and into the bladder with the result that the patient recovered, and in the same paper I report a case in which the abscess discharged into the pleura with a fatal result, though it is possible for a cure to be brought about in such instances by the discharge of pus either through the lung or the chest wall. I have also observed several cases of pelvic abscesses, probably the result of appendicitis, cured by the discharge of pus through the rectum or vagina.

When the tender swelling has been recognised a sudden return of severe pain, followed by collapse, sometimes fatal in a few hours (as in a case recorded in the paper before mentioned), and followed by symptoms and signs of general peritonitis, indicates rupture of the abscess into the general peritoneal cavity. The following case illustrates some of these points.

CASE 6.—A man, aged 23 years, was sent by Dr. P. R. Ingram of Wallsend to a private hospital on March 15th, 1900. When at work on March 3rd he felt pain in his abdomen and went home. Dr. Ingram saw him and sent him to bed. On the following day Dr. Ingram found a definite swelling in his right iliac fossa, and from the symptoms and signs recognised the case as one of severe appendicitis and advised immediate operation. The patient and his friends resented this suggestion and the ordinary methods of medical treatment were adopted. The patient progressed favourably; indeed, he seemed so well as to be convalescent, until March 13th, when reaching out of bed to get something he was suddenly seized with intense abdominal pain. Dr. Ingram saw him shortly after and found him in a condition of collapse, with cold extremities, feeble rapid pulse, and frequent vomiting. On the following day I saw him. He then had all the symptoms and signs of general peritonitis. We discussed the question of operation, but, recognising the grave condition of the patient, the seriousness of an operation in his condition, and the improbability of any good result, we decided to wait and watch for further attempts at localisation of the pus which we felt sure was present. On the following day he was driven carefully in an ambulance bed to the private hospital. On admission his condition was found to be no better than on the previous day. On March 16th, at 2 P.M., the patient appeared to be dying and there were signs of a large quantity of fluid in his abdomen. With just sufficient chloroform to dull his sensibility a short incision was made above the pubes through which a glass drainage-tube was introduced into the pelvis. A large quantity (about a quart) of pus and stinking fluid escaped. He died at 4 P.M.

Post-mortem examination showed general peritonitis. There was a large quantity of pus in the pelvis, with much lymph and matting of the whole intestines. The left side of the abdomen was least involved and there was no fluid there. The hepatic pouch was a large abscess cavity filled with pus and altered blood. The cavity was lined by soft lymph and extended as far down as the brim of the pelvis. On the outer side of the cæcum and the ascending colon there were several (five or six) perforations from a quarter to three-quarters of an inch in diameter, which appeared as if caused by the escape of pus in the bowel. The inside of the cæcum and colon was inflamed and the cæcum contained blood little altered. The inflamed appendix lay along the outer side of the ascending colon with its tip extending into the hepatic pouch. The tip was sloughing and perforated. No enterolith was present.

The abscess, although of appendicular origin, may be in a position remote from the appendix and may show itself at a considerable distance of time after the original attack (Case 5). The following cases will illustrate this point and also prove that general septic peritonitis can be spontaneously recovered from, a fact perhaps not sufficiently recognised.

CASE 7. *Appendicitis and general peritonitis; recovery from general peritonitis; death from peritoneal abscess due to localisation of a general infection.*—A girl, aged 19 years, was admitted to the Royal Infirmary, Newcastle, on August 30th, 1900. She was in her usual good health until 11 days before, when she was suddenly seized with a very severe pain in the right iliac region which made her sweat and vomit. She had had similar attacks previously, but not so severe, and they had always passed off in a few days. On this occasion the pain had got less, but had never left her. She had painful frequent micturition, but no retention, and her bowels acted regularly every day without diarrhœa or tenesmus. Her abdomen swelled and was very tender especially at the lower part. She had gradually got weaker, because, as she said, she had had no sleep at all since her illness commenced and had not been able to take any food. On admission she looked very ill; her face was flushed and slightly cyanotic (suggesting pneumonia), her pulse was 100 and soft, and her temperature was 99·6° F. The upper part of her abdomen moved freely with respiration; below the umbilicus there was no movement and there was a definite swelling like a six months' pregnant uterus. A catheter drew off four ounces of urine but did not affect the swelling. No definite mass or tumour could be felt. The hypogastric tumour and the right flank were dull on light percussion; both were resonant on strong percussion. No bulging could be felt per rectum or per vaginam.

On opening the abdomen the omentum was exposed adhering to the right side of the anterior pelvic peritoneum. Behind it were matted small intestines extending down to Poupart's ligament. An opening was made by separating a coil of small intestine from the brim of the pelvis when foul pus and gas began to escape. This was mopped away steadily as it appeared and took some time to discharge, as 30 or 40 ounces were estimated to be present. When the discharge finally ceased the cavity was freely opened up and packed with gauze. It occupied the whole available pelvis. The appendix was found lying on the outer side of the cæcum and was there adherent. It was gangrenous at its tip which was lying loose. In close relation to it was an enterolith. The appendix was removed and the abdomen was about to be closed when pus was seen oozing from above. A collection was then discovered in the liver pouch. This was mopped up and the pelvis and this cavity were drained by large indiarubber tubes and gauze brought out at the back. The patient was very ill immediately after the operation but rallied completely in four hours. 10 hours after the operation she died.

On post-mortem examination the opening on the right side made at the operation led into the large abscess cavity formed by the pelvis and roofed in by matted small intestine and omentum. Under the right lobe of the liver there was a granulating cavity with a trace of pus in it. The rest of the peritoneal cavity was free from pus, but everywhere there was a little sticky lymph and some recent flimsy adhesions (evidence of recent general peritonitis). The margin of the right lobe of the liver was adherent to the parietal peritoneum, and on tearing through these adhesions a large quantity (fully two pints) of very foul pus similar to that found in the pelvis escaped. This sub-diaphragmatic abscess had pushed the diaphragm to the level of the upper border of the third rib anteriorly and laterally. Below, it was confined to the right lobe of the liver. There was some clear fluid in the left pleural cavity.

CASE 8. *Appendicitis; general peritonitis, which had become localised; abscess; acute septicæmia; death.*—A female, aged 51 years, was admitted to the Royal Infirmary, Newcastle, on Sept. 1st, 1900. She was perfectly well until six weeks before, when her illness commenced suddenly with pain in the right side and vomiting. A bad attack of "inflammation of the bowels" followed this and for some days she was very ill. She gradually improved until two weeks before her admission, when she had another attack of pain. The lump in the side was only noticed two days before. On admission she looked ill and feeble, her temperature was 101° F., her pulse was quick, and her abdomen was distended. In the right loin there was a large swelling like a kidney tumour, which projected anteriorly and extended inwards close to the umbilicus downwards as far as the anterior superior

iliac spine, and upwards as far as the costal margin. On percussion the swelling was dull in the loin and over the greater part of the front.

Operation was performed on Sept. 1st. On opening the abdomen the colon was found to be densely adherent to the parietes. In front of the colon and lying between it and the anterior abdominal wall immediately below the liver a large collection (two pints?) of pus was opened. No prolonged search was made for the appendix. The abscess was drained with a large tube and gauze. On the 2nd, the day following the operation, in the morning she was fairly well; her pulse was 128 and her temperature was 99·6°. About mid-day she became delirious. From this time her temperature gradually rose, the delirium increased, and symptoms of acute septic poisoning developed. She died on the 6th with a temperature of 106°.

At the post-mortem examination the abscess which had been opened lay on the hepatic flexure of the colon and was limited above by the liver. There was no collection of pus in the liver pouch, which was obliterated by dense adhesions. The pelvic cavity was filled with pus and liquid fæces and was shut off from the rest of the abdomen by a roof of matted small intestine. The general peritoneal cavity was obliterated by adhesions, most marked on the right side and diminishing towards the left. The small intestines were universally adherent by long flimsy adhesions, producing an appearance as if the intestines were wrapped up in a network of fine cord with meshes. Both liver and spleen were fixed by firm adhesions. The appendix was lying on the outer side of the cæcum; there was an old perforation within half an inch of its cæcal attachment. On the lower part of the cæcum there was a perforation three quarters of an inch in diameter, which looked as if it was due to ulceration from without into the bowel. There was marked colitis but no ulceration of the colon.

CASE 9. *Appendicular abscess opened and drained; general peritonitis; recovery; death from residual abscess.*—A miner, aged 24 years, was admitted into the Royal Infirmary, Newcastle, for the last time on Dec. 5th, 1899. Seven months before he had been in the Infirmary under Mr. Morison's care for acute appendicular abscess. He was very ill at that time, and it was doubtful whether the peritonitis was still localised or had then become general. On May 25th, 1899, with a minimum of anæsthetic his abdomen was opened on the right side and a large quantity of pus escaped. He was discharged well 23 days afterwards and went to work six weeks later. For six months he felt quite well and did his work, which was heavy (hewer in the pit), regularly, and he was often drunk. Two months before he had been found asleep and drunk on the railway, where he had probably been lying for some hours, and was very cold when discovered. Next day he did not feel well, was sickly, and vomited after taking an aperient. After staying in bed for a fortnight he noticed a small lump of about the size of the end of his finger near the middle of the old scar. This burst and flatus escaped from it. On admission he was much emaciated and anæmic, with a weak pulse and a temperature varying from 99° to 102·6° F. There was a fæcal fistula at the centre of the old incision discharging a quantity of pus and fluid fæcal matter. No mass was to be made out and nothing further was discovered on bi-manual or rectal examination. He continued steadily to lose ground and had a regular morning fall and evening rise of temperature, with profuse night sweats, but no definite indication for operation could be found. On Dec. 17th (12 days after admission) he was suddenly seized with a sharp pain in his right chest and difficulty in breathing. He was much collapsed and looked as though he would die. Next day all the physical signs of consolidation were found and acute lobar pneumonia was the diagnosis made. During the following days his general condition improved and his temperature and other symptoms and signs entirely accorded with the diagnosis. A crisis occurred on the 22nd and the temperature rapidly declined, becoming subnormal on the 25th, when he died unexpectedly.

Post-mortem examination showed that the fæcal fistula led down into the pelvis and its internal orifice was found to open into the ileum about three inches from the ileo-cæcal junction. The appendix was discovered on the inner side of the cæcum, pointing inwards and upwards, and close to it an enterolith was lying free. There were cicatricial changes in the appendix and a perforation was discovered in it when surrounding adhesions had been separated. There was no pus and there were few adhesions in the neighbourhood of the appendix. In the rest of the abdomen the intestines were all matted by old firm adhesions, especially marked in the pelvis; between the adherent coils there were numerous small pockets of pus. The whole of the organs in the upper abdomen were densely adherent. In separating the right lobe of the liver an immense abscess was opened into; it was bounded on the inner side by the liver, on the outer by the chest wall; below, it had gone through the right kidney capsule and destroyed some of its substance (it had not invaded the liver); above, it had gone through the diaphragm by a sloughy opening large enough to admit a finger, and there was fully a quart of pus in the right pleura. The lung was compressed but was not solid as had been supposed.

Treatment.—Operative treatment alone requires consideration. It is dangerous and neglectful to leave pus alone in the peritoneal cavity. In the case of pelvic abscess thought to be due to appendicitis, if the pus can be liberated per rectum in the male and per vaginam in the female this is undoubtedly the safest measure and should consequently be the method of choice. If there be a painful bulging into the anterior wall of the rectum of the male, and there is œdematous mucous membrane over it, and if these are accompanied by rectal tenesmus and passage of mucus, or if in the female the posterior vaginal wall above, in contact with the pouch of Douglas, is distended, this plan is indicated. This operation I have done many times and find that it is both simple and safe. Its one drawback is that the appendix is left and in a considerable percentage of cases causes further trouble. Of this fact the patient should be warned and told to come back for the removal of the appendix at the earliest period if the pain recurs.

The operation.—With the patient under an anæsthetic and in the lithotomy posture the skin surrounding the anus and genitals should be cleansed, shaved, and antisepticised. In the case of a male patient the anal sphincter is next dilated and the rectum is cleansed with boric lotion. The upper part of the rectum is then packed with iodoform gauze, which is secured by a pair of forceps or silk. With a Sim's vaginal speculum the posterior wall of the rectum is retracted and the index finger of the left hand of the operator feels for the most bulging œdematous spot on the anterior rectal wall. A metal catheter in the bladder empties it and serves as a useful guide as to the position of the prostate, above which the rectal puncture has to be made. A long strong hypodermic needle is guided by the finger in the rectum up to the spot indicated and is pushed through into the swelling. If pus can now be withdrawn, as is generally the case, a director is forced into the abscess guided by the needle, and the latter is then taken out. A pair of forceps pushed along the director and dragged out open makes a large hole for the pus to escape. The forceps should be dragged out in such a way as to make the opening vertical. If it is made transverse the large vessels running vertically downwards may be torn across and cause serious hæmorrhage. During this time the director should be held in position in the abscess cavity to serve as a guide for a strand of iodoform gauze, one end of which should be left in the abscess and the other outside of the anus. The protecting iodoform plug should then be removed from the rectum and the operation is complete. The after-treatment consists in keeping the external parts clean, dusting with boric powder, and the frequent renewal of an antiseptic pad. In 48 hours the gauze-plug is removed by drawing on the outside end. In females by the same manœuvres the pouch of Douglas is drained through the vagina. The following case illustrates such treatment in a virgin female.

CASE 10.—A girl, aged 19 years, was admitted to the Royal Infirmary, Newcastle, on August 14th, 1899. Five weeks before, at 10.30 A.M., she had a severe attack of cramp-like pain across the lower part of the abdomen which doubled her up and made her feel so ill that she was at once obliged to go to bed. As soon as she got into bed she vomited. She had to stay in bed for three weeks, and her pain was only relieved when she got "pills." She had had no bladder or rectal trouble and her bowels had been regular. She had been treated during the last two years for anæmia and had seldom menstruated. On examination of the abdomen a tender indefinite mass could be felt filling the hypogastrium. Per vaginam the vagina was small and virginal. The posterior fornix was bulged downwards by a tender swelling, filling the pouch of Douglas, and a uterine probe showed the uterus to be lying above and pushed forward by this swelling. The diagnosis arrived at was that of ovarian cyst inflamed and impacted in Douglas's pouch. The abdomen was opened between the umbilicus and pubes and the pelvis was found to be hidden by inflamed adherent intestinal coils. The patient was next placed in the lithotomy posture and a hypodermic needle was guided through the vagina into the swelling behind the uterus. This demonstrated the presence of pus. The vagina and its outlet were enlarged by an incision in the ischio-rectal fossa of the same sort as is made in lateral lithotomy, and a further incision in the posterior fornix allowed of the escape of about a pint of pus. The cavity was packed with iodoform gauze and the abdominal wound was entirely closed. On Oct. 3rd, 1899, she returned to report herself as entirely recovered.

In women the catheter should be passed every six or eight hours till the plug is removed, and as this causes no perceptible irritation it can be left for a longer time than it can be in the rectum where it is apt to give rise to some discomfort. The after-treatment is otherwise similar. No douching is necessary.

In my previous paper in the *Edinburgh Medical Journal*, already referred to, the following sentence occurs: "My position with regard to appendicitis with abscess is this: that in the majority of instances the appendix should be removed at the same time that the abscess is evacuated, and that this can be done without risk and with great advantage to the patient, but that in a minority of cases the operation should be confined to the treatment of the abscess." Since this was written the minority has dwindled, and at the present time I advise the removal of the appendix in nearly every case, feeling that where it has been left the operation is an incomplete one (Case 2). The following case is also a striking example.

CASE 11.—A man, aged 23 years, was admitted to the Royal Infirmary, Newcastle, on Dec. 23rd, 1899. Three years before the patient had an acute attack of "inflammation of the bowels," followed by abscess. The attack came on suddenly with pain all over the abdomen, becoming localised in a few days in the right iliac region, where a swelling appeared. At the end of five weeks he was very ill and Mr. Morison was called in and operated at once, letting out a large quantity of matter. A tube was left in for three weeks and the wound healed in two months. At the end of three months from the commencement of his attack he went to work feeling quite well. Six months after the operation the patient had another similar attack and a lump formed in the same position as before. After two weeks the swelling got so large that another operation was advised by his medical man. Immediately afterwards he had a copious loose motion containing a

large quantity of yellow matter, and by the next day the swelling was gone and he was able to get up. Since that time he had had four or five attacks at intervals of a few months, never lasting more than a few days and never severe. Three days before admission his last attack commenced and on the second day he observed a swelling. On admission his temperature was 99° F. and his pulse was 92. The scar of the old incision was seen in the right iliac region. His abdomen was rigid and tender on the right side, and in the right iliac region there was a definite swelling. It was immediately above the centre of Poupart's ligament, was resonant on light percussion, and was of limited area. At the operation, after the evacuation of some pus, the perforated appendix was found lying in the sub-cæcal pouch and was densely adherent.

The operation should be done with the object of draining the abscess and removing the appendix and to do this safely undoubtedly requires great care and some practice. It also demands that the patient should not be too seriously ill to tolerate a fairly long operation; that skilled assistance shall be available; and that the surroundings can be so adapted as to approach a hospital standard.

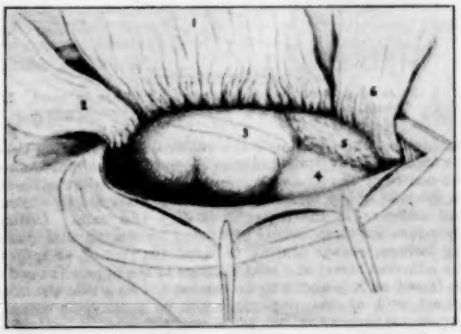
Preliminary treatment.—Except in acute and urgent cases five grains of calomel should be given by the mouth and five hours later a pint enema of salt water. During this time the skin of the right side of the abdomen and back can be prepared as for an ordinary operation, bearing in mind the fact that rough scrubbing may cause diffusion of a localised collection of pus. The patient, surgeon, assistants, nurses, instruments, &c., are prepared with the same care as for any other operation. The incision (for advantages of this see my previous paper in the *Edinburgh Medical Journal*) is made on a line drawn from the back of the right ilio-costal space at its centre to one inch above the symphysis pubis (see Fig. 7). It is commenced in the middle third of this line,

FIG. 7.

and the abdomen is, when possible, opened here for about three inches. In ordinary abscess cases it is then prolonged to the back of the ilio-costal space and in difficult cases anteriorly to the linea alba. In dividing the abdominal wall branches of the circumflex iliac artery will be encountered behind, and in front, close to the edge of the rectus muscle, the deep epigastric vessels are met with; as a rule the incision stops here, but should they require division it is important to expose them by dissection with the knife from the front and to clamp before cutting them, as if the abdominal wall is divided with scissors and the vessels are not seen and secured they retract as soon as cut into the loose sub-peritoneal tissue and are difficult to find. Through the preliminary short incision the peritoneum in ordinary cases is opened and the diagnosis and position of the abscess are verified. When the abscess is adherent to the abdominal wall the muscles overlying it are œdematous, and as the pus is approached the tissues become more infiltrated and dense. Instead of opening the abscess by a continuation of the dissection I prefer at this stage to extend the incision to the back, to open the peritoneum where it is free posteriorly, and to pack off the peritoneal cavity all round the adherent abscess before opening it from the outer side. When the abscess is lying on the outside of the cæcum or ascending colon it is opened by this incision and can be fully exposed from the back and outer side, allowing the appendix to be excised without disturbing surrounding adhesions or opening the general peritoneal cavity. In very acute cases the cellular tissue and muscles of the abdominal wall will be œdematous even though the abscess is not adherent to the parietes. In some cases the cæcum and colon are adherent to the parietal peritoneum and without due care may be injured in dividing the anterior abdominal wall. This is to be avoided by recognising the peritoneum when reached and by pinching it up between the fore-finger and thumb. A non-adherent peritoneum rolled between them feels thin, can be drawn forward, caught by two pairs of hæmostatic forceps and opened. If the bowel is adherent underneath the peritoneum cannot be drawn into a thin fold and must be opened by careful dissection.

In all cases when the abdomen has been opened fully the first step is to pack the peritoneal cavity with long thick strips of sterile gauze wrung out of normal saline solution (see Fig. 8). Need I add that two responsible persons should

FIG. 8.



1, Gauze in general peritoneal cavity. 2, Gauze in hepatic pouch. 3, Cæcum. 4, Abscess. 5, Omentum. 6, Gauze in pelvis.

count these strips independently; that the number should be written down before the operation; that strips must never be cut; and that when the operation is finished the strips of gauze should be again carefully counted! The packing must be done with great care to avoid the separation of adhesions and possible escape of pus, and this is best accomplished by opening the wound and drawing forward the anterior abdominal wall with retractors.

The chief object of this operation is to carry out every step with the parts to be manipulated well exposed to view, and until this can be done satisfactorily the operation wound must be enlarged. By the aid of suitable retractors, and with the incision previously mentioned carried as far forward as the middle line, the most difficult conditions in the lower abdomen or pelvis may be dealt with (see Case 2). When the peritoneal cavity has been fully protected as described the next step is to empty and to cleanse the abscess. This is to be entered from its outer side by pushing the cæcum and ascending colon inwards, and upwards, too, if needful. A steady and slow separation with the fingers allows the pus to escape gradually and it can be mopped up with gauze as soon as it appears (see Fig. 9). If there is a large collection of pus its escape is expedited by turning the patient over towards the right side and enlarging the opening. As soon as the pus ceases to flow from the cavity the abscess is more fully exposed by the separation of adhesions. Its cavity is wiped out with gauze and the appendix is searched for. It may be seen at once or may be most difficult to discover even after a prolonged search. Occasionally it may be felt when it cannot be recognised, its appearance being much altered by the conditions present. The superior longitudinal band of the cæcum leads to its base, but this cannot always be followed. A stercorolith in the cavity of the abscess is usually lying close to a perforation in the appendix and may guide to it. A rounded thick body felt between the finger and thumb may turn out to be the appendix.

With due care it can very rarely remain undiscovered. Then the abscess cavity is to be packed with clean gauze and the appendix is excised. The method of accomplishing this varies with the conditions found. The appendix may

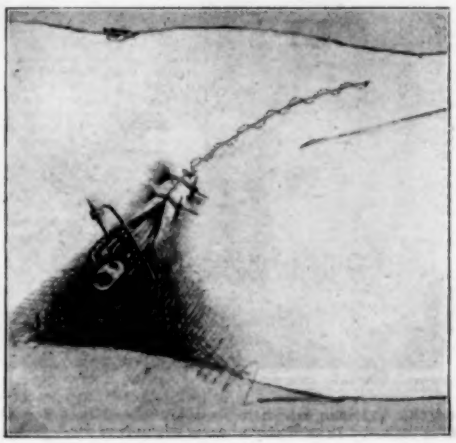
FIG. 9.

1, Gauze in general peritoneal cavity. 2, Gauze in hand. 3, Cæcum. 4, Abscess. 5, Omentum. 6, Gauze in pelvis.

be thickened and densely adherent to the surrounding tissues throughout or entirely gangrenous and lying almost loose in the centre of the abscess confined by the flimsiest adhesions In the case of the former its removal is attended by difficulty and danger; in the latter it is easy and safe. Ordinary adhesions are most readily separated by tearing with dissecting forceps, always bearing in mind the risk of an injury to the adherent bowel and that damage to the appendix need not be feared as it is about to be removed. As a rule the abrupt closed end of the appendix will be a suitable place to commence separation, but occasionally it is easier to divide the appendix between two clamp forceps at its cæcal attachment and leave its extremity to the last. In cases with dense adhesions (as in Case 2) I have since then divided the peritoneal coat of the appendix and without further difficulty or risk have shelled out the whole of its inner coats, thus obviating further appendicular trouble. When the appendix has been separated its mesentery must be divided and the vessels secured either after or before division, setting it free up to the cæcal attachment. When the whole appendix and its mesentery are involved in the abscess the mesentery and vessels may be so sodden and so friable that no ligatures will hold. Gauze packing is then to be relied upon for the arrest of bleeding. A strong ligature is tied tightly round the base of the appendix, which is firmly held between a finger and thumb above to prevent the escape of its contents, and it is cut through, leaving about one-eighth of an inch beyond the ligature. The mucous membrane of the stump is next rubbed with pure carbolic acid and dried and if the wall of the cæcum surrounding it is not inflamed and friable the stump can be pressed into the cæcum where it is retained by a purse-string suture as in ordinary non-suppurating cases. When the cæcal wall is thickened from inflammation sutures as a rule will not hold and gauze packing and free drainage must provide for leakage. Ligatures and sutures for this purpose should be of catgut and digestible, as it is impossible to avoid infection of them. The temporary gauze packing is now removed from the abscess cavity and replaced by an indiarubber drainage-tube, the inner end of which lies in the abscess, the outer in the back of the wound, and by a gauze packing (iodoform or gauze wrung out of corrosive solution and sprinkled with boric powder), so arranged as to check all oozing from the cavity, to depress the stump of the appendix, and to protect the general peritoneal cavity. At the same time it is well to remember that the gauze has to come out before the tube, and the ease with which this is effected is in proportion to the care and method bestowed upon its introduction. When this is all accomplished there is a general washing up of the patient, and fresh towels are placed over the soiled ones. The peritoneal gauzes are now removed, with the exception of the piece last introduced. All are counted, and the suturing of the wound is taken in hand. To this I attach very great importance, for unless it is properly carried out a hernia of the scar may be expected. If it is done in the manner about to be described this is most unlikely to occur. I cannot in this connexion give any exact figures, but what I know sufficiently justifies, I think, an even stronger statement than that which I have made. Of considerably over 100 patients on whom I have operated for abscess of the appendix six have returned to consult me concerning a hernia. Three of these had small scars in the linea semilunaris and one in the linea alba, from which abscesses had been drained. None of them, with the exception of the last (Case 3), had had the appendix excised. The two remaining cases were operated upon by the method I have described, and both had an inguinal hernia on the same side as the scar which I scarcely doubt was a result of the diminished elasticity of the abdominal wall on that side. None that I have seen (and many of them have come for examination) or heard of have any hernia of the scar.

The whole wound is closed except for one inch behind, unless in exceptional instances (Case 5). The first row of sutures (all are of catgut) includes the peritoneum transversalis fascia and transversalis and internal oblique muscles, and is interrupted. When this row is completed a paste made of iodoform powder and corrosive lotion (1 in 1000) is rubbed into the wound, which is cleared of all excess by thorough mopping with sterile gauze. The next layer of sutures, also interrupted, brings together the divided edges of the external oblique. A third row of interrupted sutures tacks the subcutaneous fat and deep layers of the skin to the external oblique muscle; and a fourth buried continuous subcuticular suture of fine catgut brings the skin edges into perfect apposition, except posteriorly, where one or two silkworm gut interrupted sutures are used (see Fig. 10).

FIG. 10.



After-treatment.—The dressing should be renewed frequently until free discharge has ceased. Every two hours is my rule for the first 12 hours after operation. In doing this it is unnecessary to disturb the gauze on the anterior part of the wound if it has been kept separate from the portion surrounding the drains behind. As soon as the serous oozing has ceased dressings should be less often disturbed unless a fæcal fistula develops, when a return to more frequent dressing is needful. On the evening of the operation day, if the patient be an adult, one-third of a grain of morphia is given hypodermically as in all of my abdominal cases. Until flatus has been voided—and this is aided by the passage of a tube into the rectum and by the administration of calomel (one grain hourly up to eight grains), and failing these by the administration of a turpentine enema (one ounce of turpentine and one pint of soapy water) on the second day—no nutriment is allowed by the mouth, nothing but sips of hot water being given. In a feeble patient nutrient enemata (two

ounces of milk, two ounces of beef-tea, and half an ounce of whisky) are administered during this time. On the third day a movement of the bowels is secured by the administration of an enema (one pint of salt water). On the fourth day the gauze drain is removed and care must be taken in doing this not to pull out or disturb the tube, through which a long strong probe may be inserted to prevent kinking whilst the outer end of it is steadied and held in place. On the sixth day, if the discharge is quite small in quantity, the tube can be withdrawn for half its length and cut off. In another few days, depending upon the amount of discharge, it may be altogether dispensed with.

A fæcal discharge from the wound is usually preceded by a rise in temperature. Neither require any special treatment unless in exceptional instances (Case 3), and the wound heals steadily if kept clean by frequently changed dressings. If the appendicular abscess has occupied a position in the abdomen internal to the cæcum drainage should be aided by tilting the patient over towards the right side. This is readily and comfortably done by placing a pillow lengthwise under the left side of the back when the patient is moved off the operating table into bed. No abdominal belt is needed after the wound has healed.

The mortality of this operation is small, and I cannot recall a single instance in which death could be attributed to it. At the present time and for this part of the country I would give the mortality of appendicular abscess at 8 per cent. of operation cases. This will diminish in the same remarkable way as that for strangulated hernia has done so soon as practitioners become more skilled at early diagnosis and realise more fully the need for operative treatment.

List of Cases of Abscess in Connexion with the Appendix Vermiformis.

Sex.	Date.	Condition.	Appendix.	Result.
	1899.			
F.	July 18th.	Abscess.	Removed.	Recovered.
M.	August 6th.	,,	,,	,,
F.	,, 14th.	Pelvic abscess.	Not removed.	,,
M.	Oct. 5th.	Abscess.	Removed.	,,
F.	,, 10th.	Pelvic abscess.	,,	,,
M.	,, 25th.	Abscess with pelvic peritonitis.	,,	,,
M.	Nov. 7th.	Abscess.	,,	,,
M.	,, 7th.	,,	,,	,,
M.	,, 16th.	,,	,,	,,
M.	Dec. 13th.	,,	,,	,,
M.	,, 23rd.	,,	,,	,,
	1900.			
F.	Jan. 18th.	,,	,,	,,
M.	,, 29th.	Abscess and pelvic peritonitis.	,,	,,
F.	Feb. 14th.	Abscess.	,,	,,
M.	,, 21st.	,,	,,	,,
F.	,, 24th.	,,	,,	,,
F.	May 7th.	,,	,,	,,
F.	,, 9th.	Abscess and suppurating ovarian cyst.	,,	,,
M.	,, 10th.	Pelvic abscess.	Not removed.	With a sinus.
M.	,, 14th.	Abscess.	Removed.	Recovered.
F.	,, 26th.	,,	,,	,,
M.	June 21st.	Abscess with peritonitis.	,,	,,
M.	,, 29th.	Abscess.	,,	,,
F.	July 27th.	,,	,,	,,
M.	,, 29th.	,,	,,	,,
F.	August 7th.	,,	,,	,,

CONCLUSIONS.

The early diagnosis of abscess in connexion with the vermiform appendix is of great importance.

A dangerous abscess may be present without any of the ordinary symptoms or signs of pus formation.

The diagnosis is based upon the history of an acute attack of appendicitis and the presence of a definite tender lump.

The position of the appendix and the relations of the abscess may be foretold by a careful study of the tumour.

The diagnosis of pelvic cases in women is attended by special difficulties. In men and women bimanual examination may clear up an otherwise doubtful case.

Spontaneous relief and possible cure may follow the discharge of pus into adjacent bowel.

An abscess, though of appendicular origin, may be remote from the appendix and may be residual. Many of such pus collections are due to the localisation of a general peritoneal infection which has been recovered from.

Early operation is the proper treatment and with few exceptions the vermiform appendix should be removed at the same time as the abscess is drained (pelvic cases form the chief exception to this rule).

The abdominal opening should be large enough to permit of perfect inspection of all manipulation and the abscess should be drained from behind.

To Mr. G. G. Turner, surgical registrar to the Royal Infirmary, Newcastle, I am indebted for an appended list of all cases operated upon by me at the infirmary and private hospital in which pus was found in connexion with the vermiform appendix during the past consecutive working 12 months. I am also indebted to him for the notes of the cases related. Mr. W. G. Richardson, assistant surgeon to the Royal Infirmary, Newcastle, has kindly supplied me with drawings made by himself to illustrate the positions of the varieties of appendicular abscess and the different steps of the operation described.

Newcastle-on-Tyne.

POINTS IN THE CLASSIFICATION AND DIAGNOSIS OF SOME JOINT AFFECTIONS.

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DURING the course of a year in Bath, as in most other balneological resorts, one is brought face to face with many difficult problems in respect to the classification and diagnosis of joint affections. And this is comprehensible when one considers how little is really known as to the etiology and pathology of most of them. I am writing this paper with the idea of drawing attention to certain points which have struck me as of importance and value, and as being of interest to others working in the same branch of medicine and also with the hope that by the exchange of views we may be enabled to come to some common understanding on various vexed points. For the present no two men seem to agree as to the diagnosis in certain classes of disease; for example, and to show how chaotic our ideas are, take that most common generic name "rheumatic gout." To judge from the number of patients labeled as suffering from that disease one would think it was the most common of all joint affections; yet what is the nature of "rheumatic gout"? Is it gout or rheumatism, rheumatism in a gouty subject, gout in a rheumatic, a disease *per se*, or rheumatoid arthritis? Such are a few of the questions which arise on seeing a case so labeled. On investigation such cases almost invariably can be placed in some more definite and scientific category than that of "rheumatic gout," whose one virtue seems to be that it covers a multitude of sins and errors in diagnosis, but whose entity as a separate disease is doubtful. This looseness in diagnosis in all joint affections arises not so much from want of knowledge or care on the part of those making the diagnosis as from the confusion of ideas which exists, more or less, in all our minds as to certain forms of disease. On reference to most text-books one is struck by the unanimity with which joint diseases are described as they have been described for years, irrespectively of the advance of science, and the absence of method in classing them according to their mode of origin. Now it seems to me that most arthropathies can be referred to several great classes: (1) the bacterial or toxic arthropathies; (2) the nerve arthropathies; and (3) the senile degenerative arthropathies. But besides placing all arthritic cases in these classes it is also possible further to

differentiate between the essential arthropathies—i.e., those in which the joint troubles form the principal symptom of the disease, and the accidental arthropathies—i.e., those which occur with a certain amount of regularity but are not essential symptoms of the disease in which they arise. Thus I should class as essential arthropathies rheumatism, rheumatoid arthritis, gout, senile arthritis, and pulmonary osteo-arthropathy, whereas gonorrhœal, scarlatinal, malarial, and nerve arthropathies are accidental but integral symptoms of some specific condition. I should also explain that by the expression "toxic" I do not wish to confine the meaning of the word to the products of bacterial activity only, but desire to include all products, whether elaborated by specific bacteria or arising from the tissues themselves or by chemical processes. Thus, I am enabled to place gout in a class with other diseases presenting many similar points of interest.

In studying joint diseases one sees how opinion has altered with regard to their origin. A few years ago the nervous origin of most of them was firmly believed in, yet now they can, to a great extent, be marshalled into the bacterial or toxic category. Whilst admitting that pure nerve arthropathies exist, yet from what we know of bacterial activity it certainly seems more reasonable to suppose that they or their products are the cause of most joint changes, rather than that some obscure nerve degeneration or reflex action should be so. As the specific cause in more and more diseases is found to be bacteria or their products, so does it become more likely that such micro-organisms are the cause of nearly all of them.

According to our present knowledge the more common arthritic troubles may be classed as follows:—1. Bacterial or toxic arthropathies: (*a*) bacterial—rheumatism, rheumatoid arthritis, gonorrhœal and scarlatinal arthritis (and probably malarial arthritis); and (*b*) toxic—gout and pulmonary osteo-arthropathy. 2. Nerve degenerative arthropathies, such as occur in tabes, ataxic paraplegia, &c. 3. Senile degenerative arthropathies, such as senile arthritis or malum coxæ senilis. Malarial arthritis may be classed provisionally as bacterial, for I take it that the malarial parasite may be regarded in its action as to all intents and purposes a bacterium, although differing considerably in its life-history.

Another point to notice is that the joint changes in any of the above complaints are not complications, but are all true manifestations of their separate disorders. They are not secondary or separate infections or diseases, but some doubt may still exist whether in a disease having a bacterial causation the bacteria themselves or their products are the cause of the symptoms. Some observers hold that it is the products which give rise to them, whilst others maintain that it is the micro-organisms themselves, and with these latter I side myself. What evidence we have is in favour of this view; for have not the micro-organisms of rheumatism, rheumatoid arthritis, and gonorrhœa been found in the joint structures and joint fluids? In diseases having constant and well-marked changes it is perhaps only natural to expect that the materies morbi itself should be found at the seat of greatest mischief. And if the changes were only caused by products elaborated elsewhere surely they would be much more amenable to treatment, more evanescent in their course, and more unstable in their character. And what better nidus could be found for any micro-organic growth than a joint, surrounded by a fluid medium richly-endowed with nutriment suitable to their growth? No, I cannot but feel that most forms of arthritis, whether the primary and principal manifestation of a disease or secondary and unimportant, must have bacteria as their provocative agent. So far science, in some conditions, has not found the bacterial agent, but all the same the infective character of most of them is manifest, and so, until more perfect and fuller knowledge is ours, one must rest content.

In considering various points of interest in the various diseases I have attempted to classify, one's attention is first turned to rheumatism. It is a big field and a big question for observation, but is much simplified if we consider all its forms and modifications as only so many different manifestations of one and the same poison. If this is not done, and if we look on them as due to secondary or separate infections—a condition of things of which there is no proof—a very large question for speculation is opened out. So far all positive proof lies on the side of one poison capable of affecting many and various structures, and from this standpoint I wish to study certain points.

The first point I wish to direct attention to is the occurrence of swellings or nodules in various structures—of these there are four separate kinds which come under notice with considerable frequency. The first of these is seen in muscular rheumatism, a disease which at one time was regarded as possibly a separate disorder, but which now, I think, is generally acknowledged to be only one of the manifestations of the rheumatic poison. In this form of rheumatism, especially in those who have had repeated attacks, one's attention is frequently attracted to masses or indurated patches in certain muscles pointing to an inflammatory infiltration of the muscle substance. These patches in themselves give no pain and the patients themselves are usually unaware of their presence. The masses are the result of an interstitial myositis, probably brought on by toxic action—at least, that is the idea of those who have studied the question (Leube and Adler).[1] Patients who present these changes not infrequently develop later arthritic changes and endocarditis. These patches are distinct from the subcutaneous nodules so often noted in rheumatism, rheumatoid arthritis, gout, &c., and which appear to be entirely formed of fibrous structure, thus differing from those already mentioned. These subcutaneous nodules have been looked on as being of important diagnostic value, as it was at one time thought that they only occurred in rheumatism and that therefore all cases in which they were seen were cases of that disease. But they have been observed fairly often in rheumatoid arthritis and they occur less frequently in gout, syphilis, influenza, &c. Dr. Hawthorne,[2] whose able paper on this subject has done much to bring the question prominently before the profession, contends that the mere presence of such tumours is no proof of rheumatism. With this I fully agree, for numerous instances of subcutaneous nodules have come under my observation in gout and rheumatoid arthritis and once in gonorrhœal arthritis. They also occur in Maltese fever, a disease which often presents arthritic changes. As one would expect from the nature of the disease, those seen in rheumatism are more transient in nature and smaller than those seen in rheumatoid arthritis. In this latter complaint they are most often seen in the chronic and later stages.

While on this subject there are yet two other forms of swellings in connexion with arthritis which well repay study. One of these is due to the swelling of bursæ in connexion with joint affections and is most frequently seen in chronic gout or chronic rheumatoid cases, and occasionally in rheumatism. Many of these swellings are merely enlargements of normal bursæ and having an intimate connexion with a joint, whilst others have apparently no connexion whatever with one and may even be situated at some distance from any joint. Both kinds are liable to chronic inflammatory changes and may even contain foreign bodies of a cartilaginous nature. They seldom suppurate—never in rheumatoid arthritis—and only as the result of secondary pyogenic infection. I remember one marked case occurring in rheumatism, the patient being a woman, and who, subsequently to her second attack of acute rheumatism, developed an enlarged bursa over the left olecranon. The bursa enlarged rapidly, causing considerable pain, but on treatment subsided almost as rapidly. Some months later she had another attack of rheumatism, less acute than the other, during which she had a similar enlargement on the other side, and which also subsided rapidly. The other and last class of nodular enlargement to which I wish to draw attention is that described by Heberden. This form has often been considered to be merely a form of rheumatoid arthritis and to be only seen in that disorder. But, common as it may be in chronic rheumatoid arthritis, I have seen nearly as many in chronic gout. Of this I am certain—these nodes are osseous in character and arise principally from the ends of the phalangeal bones. They are permanent in nature, although sometimes an apparent diminution may be noted under treatment owing to the superimposed tissues being reduced in size.

It is of interest to consider the development and diagnostic value of these nodular enlargements, but with regard to the latter I fear it is small, and this is obvious when we consider that they must all originate through some irritation of the different structures involved. This irritation may be due to micro-organic activity or it may be due to some toxic action, but the result is the same—namely, a chronic interstitial

[1] Medical Record, 1900, lvii., p. 529.

[2] Rheumatism, Rheumatoid Arthritis, and Subcutaneous Nodules, p. 26.

change, resulting in one case in bony nodes, in another in bursal enlargements, in another in fibrous nodules, and in yet another in muscular masses. The explanation of these manifestations is therefore simple. Dr. F. J. Poynton and Dr. A. Paine having isolated their diplococcus in rheumatic nodules strengthens my chain of argument.

As aids to diagnosis I should say muscular swellings are most often due to rheumatism, small subcutaneous nodules also to rheumatism, larger ones to rheumatoid arthritis, bursal enlargements to chronic gout, rheumatoid arthritis, or rheumatism, and bony nodes to chronic gout or chronic rheumatoid arthritis.

Rheumatism has long been looked upon as an infective disease, but many and various have been the micro-organisms found. The researches of Dr. Poynton and Dr. Paine[3] go far to settle the question, but they are not conclusive, for it is too early to say whether the organism isolated by them is the only cause of rheumatism or whether it is only one of several which may give rise to rheumatic symptoms; and while we are still much in the dark as to mixed infections and what influence one micro-organism has upon another in determining its virulence and mode of growth, from the nature of the symptoms seen in rheumatism I feel sure only one organism is the cause. It seems evident that if a certain one is a constant feature in a certain disease or group of symptoms it must have some important bearing in its causation. A fact of importance from my present point of view is that Dr. Poynton and Dr. Paine have been able to demonstrate the presence of their diplococcus in the joint fluids and structures as well as in other sites and by inoculation have been able to reproduce the disease in animals. The inoculations gave rise to arthritis, bursitis, and teno-synovitis, as well as other symptoms, and from each of these inflammations they were able to isolate again the same diplococcus. The chain of evidence seems to me complete, but whether their organism will prove to be the only cause in all cases of pure rheumatism future scientific investigation alone will show. I cannot think that a disease with such well-marked and constant symptoms can be caused by more than one species of bacterium, although this one must have varying degrees of virulence, and its action must be governed by the attacked individual's power of resistance—the different sets of symptoms arising through the fact that the structures affected are influenced by those peculiar forces "natural selection" and "susceptibility of parts." What those forces are is not known, but it is a well-recognised fact that the various tissues of the body respond in different ways to different causes of disease, and that the same cause will affect different structures at different times under apparently similar circumstances, and even in the same person, in different ways.

On the subject of rheumatoid arthritis I feel strongly. One of the principal points in this disease which strikes an observer is that apparently under this name we have two conditions, one acute and the other chronic. The acute form of the disease is seen principally amongst children and in the comparatively young. It is not a common disease of later middle life or of old age. It is more common in females than in males and is the sequela, as a rule, of some other infective disorder, such as influenza, rheumatism, or tonsillitis. It is accompanied by a rise in temperature and swelling of the joints, which become tense from synovial distension or else soft and doughy, but with no cartilaginous or bony outgrowth; in fact, the joint presents an almost pathognomonic soft spindle-shaped enlargement. The extremities are cold and sweating and present a livid mottling, while numerous small freckles or patches of pigment appear on the skin and there may also be other vaso-motor or trophic changes. There may be great pain or almost none. Muscular atrophy is always present and shows marked selection in the muscles or group of muscles affected. Glands proximal to the affected joints are often enlarged, whilst anæmia may be a marked feature. Patients show a loss of fat and vital energy and usually present a peculiar facies which once seen is seldom forgotten. On the other hand, in the chronic cases, which may be chronic from the first or else which may be the later stages of an acute attack, the joints show a progressive crippling which becomes more and more marked as the disease advances. It is most frequent in middle life and in females, is accompanied by no fever, and the general health suffers little; it may affect only a few joints but more often many; it is very chronic in its course but is progressive with exacerbations. If chronic from the outset it usually begins in one small joint as a slight enlargement, which in time increases in size, and the disease then spreads to other joints until it may become difficult to move any joint, from stiffness, pain, and deformity. It is accompanied by much crepitation, usually of the coarser variety, and cartilaginous and even bony outgrowths appear round the margin of the joints as well as in the tendons, bursæ, &c. The movements of the limb may be much interfered with by adhesions, bands, and thickenings, whilst, in very advanced cases, even dislocations may occur. As a sequela of an acute attack, as the acute symptoms subside, the joints become more irregular, more crippled, and in fact come to present all the characteristics just described. It is not within the province of this paper to consider the pathological changes in the joints, but I would mention that the main points are, in the acute form, an inflammatory condition marked by ulceration and destruction of the joint tissues with no outgrowth or lippings, whilst the chronic form is characterised by hardening and thickening and with cartilaginous and osteophytic outgrowth and lippings.

I have so often insisted on the bacterial origin of the disease that I will not do so further here, beyond mentioning that it may be of interest to some to know that some little time ago Von Dungorn and Schneider[4] succeeded in isolating a small micro-organism which, on injection, reproduced the disease in animals. Their micro-organism was found in the joints and gall-bladder. I have not had an opportunity of comparing it with the micro-organism found by Dr. A. S. Wohlmann and myself, but it helps to prove that the disease is due to bacterial infection. Further scientific research will show whether it is due, as I believe, to one specific bacterium and that one the one found by Dr. Wohlmann and myself[5] or to other and mixed infections. As in the case of rheumatism we must wait for further proof.

The other point with regard to rheumatoid arthritis that I wish to touch on is the muscular atrophy so often seen. There are seemingly two varieties, one, exhibiting a selective affinity in its distribution for certain muscles or group of muscles, is seen in the acute forms; the other, as seen in chronic cases, being apparently merely due to disuse. In the acute form the atrophy is so acute and occurs so soon after the onset of the disease and whilst the joint changes, may be, are extremely slight and is so selective in character (the extensors and interossei being principally, but not exclusively, affected) as to preclude the possibility that it is the result of disuse only. It may affect one muscle only or a whole set, but it affects the whole muscle and not a part of it only. It often affects muscles proximal to the joint disease and the tendon reflexes are in most cases exaggerated. In the chronic cases the atrophy affects only those muscles not employed and in direct ratio to the amount of disuse and there is no increase in the tendon reflexes. It has been argued that the form seen in the acute cases, especially by reason of the exaggerated reflexes, lends conclusive support to the dystrophic theory of the origin of rheumatoid disease. But this does not follow, for we know other arthritic lesions may produce muscular wasting having similar characters. All it proves is that this particular form has all the characters of an atrophy due to nerve (probably spinal) irritation. Some hold that this irritation is set up by reflex action, but to my mind it is more probable that it is the result of toxic poisoning. We have no proof that bacteria themselves act on the central nervous system, but the whole nervous system seems to be peculiarly liable to the action of their poisons. For example, take the case of diphtheria or tetanus; or, again, certain toxins are known to act on the vaso-motor system and also on the trophic nerve condition of various structures. Thus tachycardia has been caused, according to Bezançon, by toxins. Bouchard obtained from tuberculin a substance causing dilatation of the blood-vessels, whilst Charrin and Gley obtained toxins with similar properties from the bacillus pyocyaneus, as also did Arloing from the staphylococcus aureus. Vierordt has reported a case of phthisis with neuritis of the vagus, and Semmola mentions the action of the influenza toxins on the vaso-motor centre. In no case of rheumatoid joint disease do the nerve troubles precede the joint manifestations; therefore they must in all probability arise secondarily

[3] THE LANCET, Sept. 22nd (p. 861) and 29th (p. 932), 1900.

[4] Münchener Medicinische Wochenschrift, 1898, Band xlv., p. 1269.

[5] THE LANCET, April 25th, 1896, p. 1120.

to them. But it has been argued that if muscular atrophy can, or does, arise through reflex impulses, so also may some peripheral irritation, say, from such an organ as the uterus, cause impulses capable of originating not only the muscular atrophy but also the joint lesions. This I cannot agree with. I do not deny that it is possible for reflex impulses to alter the nutrition of certain muscles and thus atrophy, but that they can give rise to grave organic changes of an acute and severe character seems to me impossible without at the same time producing some alterations in the nervous centres or in the nerves themselves easily recognisable on microscopic examination. Such changes have not been found, and until they are I cannot believe that reflex irritation alone can cause joint changes of the character seen in rheumatoid disease. In this disease, unless distinct nerve lesions are proved to exist, the theory of infection seems the more probable, the more easily understood, and the more true to clinical experience.

Gonorrhœal arthritis presents several points of interest from a diagnostic standpoint. The arthritis is always secondary to a gonorrhœal attack elsewhere, but it does not always imply that the primary attack is in the urethra. A considerable number of cases have followed infection of the conjunctiva, and this is peculiarly noticeable in children. The joint troubles are caused by the presence of the gonococcus in the joints, and it can be isolated and cultivated from the joint fluids. It is only found, however, with certainty in the early stages of the arthritis. The time of onset of the joint changes may vary: sometimes they occur within a week of the infection, but more often not until after three or four weeks. Cases have even been known to occur many months after the primary infection and when only a slight gleet has existed at the original seat of inoculation. The severity of the joint troubles, therefore, has no relationship to the severity of the primary trouble. It is most liable to affect the larger joints, especially the knees and the joints of the lower limbs rather than those of the upper. For the severity of the symptoms there is an indication in the great effusion of fluid, but the skin is seldom reddened. The pain experienced is not so severe as in a similar condition due to rheumatism. Cardiac disease is rare but not unknown. I remember well a case which in many respects resembled one of ulcerative endocarditis, and the nature of the disease was not cleared up until the occurrence of arthritis in both knee-joints many weeks after the patient was brought under observation. This case was also rather peculiar in the fact that the gleet was of the very slightest and that the joint troubles only came on as the temperature was falling and as the cardiac and general symptoms were improving. As a rule a gonorrhœal discharge renders the diagnosis easy, but in women this may not be so, as the import of a vaginal discharge may readily be overlooked or misinterpreted. It is most often mistaken for true rheumatism but the comparative absence of fever and its refusal to yield to the salicylates usually point out its true nature. Sometimes it may be confused with rheumatoid disease, more especially should it affect, as it may rarely do, the temporo-maxillary joints. It must not be forgotten also that in gout there may be a urethral discharge of a non-specific nature. However, as a rule, the joint trouble is so distinctive as to lead to little or no confusion.

Scarlatinal arthritis is a type of arthritis seen in several other infectious diseases. It is usually seen in severe cases and in adults and appears most often just as the rash is disappearing. It may affect several joints and may be so severe as to suppurate, but this is not common. The elbows and knees are the joints most frequently affected, and it has a greater tendency to affect the smaller rather than the larger joints and those of the upper rather than those of the lower extremities. As a rule the disease yields rapidly to the salicylates. This infectious form of disease is not one often seen at a balneological resort, but now and then we come across cases which have their origin in the poisons of infectious fevers and which have persisted for long periods. It is also of interest on account of the frequency with which scarlatinal and rheumatic patients develop chorea, possibly pointing to an intimate relationship between the two diseases. If we accept the discovery of a diplococcus (by Dr. W. J. Class*) as the specific cause of scarlet fever one is tempted to ask what is the relationship of this diplococcus to that of rheumatism as described by Dr. Poynton and Dr. Paine. It would be of great interest to know what their reaction is one upon another and what their influence was on each other's growth and virulence, and what influence they had on the production of chorea. Do their toxins when inoculated into the central nervous system produce choreic movements? Given a micro-organism as the cause of scarlet fever it is probable that the joint troubles are originated by the organism itself. Where suppuration occurs we know that pyogenic organisms must have reached the joints. If they, why not the others? If suppuration occurs it is almost certainly due to secondary infection and it is in such cases that the streptococcus pyogenes has been found. Class's micro-organism does not cause suppuration and it seems almost certain that the streptococcus is only an accidental secondary infection.

Malaria, to turn to a subject which is exciting at present a good deal of interest, is frequently associated with arthritic changes. In malarial cases I have seen joint troubles in two forms—one obviously due to true rheumatism and contracted probably at the same time as the malarial poison; the other form is rarer and occurs apparently as an integral part of a malarial attack. Two cases of the latter variety some time ago presented themselves to me. Both patients were in the army and their malaria had been contracted in Burma. They had never served in the Mediterranean. When first seen there were no arthritic symptoms, but they were both subject to malarial attacks at more or less irregular intervals. They had for some time past been subject to joint pains during these attacks and had therefore come to Bath to see what we could do for them. Soon after coming under observation they had attacks of ague, going through the cold, hot, and sweating stages, but as the temperature fell the patients complained of pains in the limbs and joints, the joints most affected being the knees, elbows, wrists, and ankles. The joints became somewhat swollen and painful and remained so for possibly two or three days. Muscular pains accompanied the joint ones but were not so severe or so marked. There were no cardiac troubles but there was anæmia and splenic enlargement. During the time they were under observation each patient had from three to four such attacks and on each occasion presented somewhat similar symptoms, but towards the end of their term here the arthritic symptoms did not seem quite so marked or so severe. However, they were by no means cured and I found treatment unsatisfactory. As the occurrence of joint troubles in malaria is, I believe, somewhat rare, the question arose as to the exact nature and cause of the attacks. In neither case was there any suspicion of Maltese fever and the history of the onset of the disease in Burma was quite distinct. As we know that in Maltese fever joint troubles occur due to the micrococcus melitensis it occurred to me that possibly a somewhat similar condition might exist in Burma, but I can find no history of any such disease. The attacks in my patients differed to what occurs in Maltese fever, where the joints are only affected some time after the onset of the fever and where they are also associated with a good deal of muscular pain and neuralgia.

Another point of interest is that the malarial poison seems to affect adversely the curability of both gout and rheumatism. These two diseases, when seen in malarial subjects, usually present themselves in most intractable forms. Often a gouty attack will determine one of ague and *vice versâ*. Another thing I have noticed is that in some cases, if quinine be freely administered for the ague, it seems to bring on an acute attack of gout. So much so is this that many patients tell me they can never take quinine without bringing on gouty symptoms. This is especially marked with the sulphate and hydrochlorate of quinine, much less so with the salicylate. The reason for all this seems quite unknown and I merely mention my own observations in the hope of drawing attention to certain points worthy of further investigation.

A disease, pulmonary osteo-arthropathy, may give rise to some little difficulty in diagnosis, principally owing to its rarity. It is most likely to be confounded with acromegaly, but in the latter disease there is no alteration of the nails nor are the finger-ends clubbed nor the carpus and metacarpus much thickened. The chief characteristics of the disease are great enlargement of the hands, wrists, feet, and ankles, associated with, and secondary to, some chronic pulmonary affection, such as phthisis, chronic bronchitis, and empyema. In the joints the changes are effusion with enlargements and ulceration of the cartilages and articular ends of the bones. Marie is of opinion that these changes

* THE LANCET, Sept. 29th, 1900, p. 927.

are due to toxic poisoning, but Thorburn looks on them as tuberculous. The evidence either way is slight and indefinite.

Recent research in gout seems to have done little but upset all our former ideas as to its pathology and origin. Not so long ago it seemed as if we had arrived at some common agreement on the subject, but every division of it has recently been re-investigated, with the result that all our old theories have been found wanting, and the new ones brought forward are so diverse and uncertain that it is apparently impossible to formulate any satisfactory theory. After perusing much literature on the subject I find that about the only fact which seems tolerably certain is that uric acid, or its derivatives, is the immediate cause of the joint troubles. But why uric acid should be deposited in these positions, why there should be an excess of uric acid in the blood, if such excess exists, and why it should not be excreted as is done in other conditions, seem to be still *sub judice*. It appears to me that something more than excess of uric acid is necessary, and the theory of a toxic condition of the blood or tissues being the determining agent, seems from one's experience to be the most likely solution of the difficulty. All experiments on the healthy subject have failed to bring about the gouty state, and therefore it seems as if in gout the blood or tissues acquired some peculiar characteristic, with the result that some ingredient of the blood which in the natural state would be excreted without any symptoms becomes a poison capable of causing acute joint troubles. So much, however, is pure speculation that I do not care to enter further into the subject here.

Questions of diagnosis between certain irregular and chronic forms of gout and some forms of rheumatoid arthritis and subacute and chronic rheumatism offer the most common difficulties we who practise at bathing resorts have to consider. The acute forms of the various diseases are so characteristic as to give rise to no trouble. It is as gout passes from the acute into the chronic and more irregular forms, or where it has never been acute, that diagnostic difficulties arise. Especially is this so in middle-aged or elderly women, and it is often only after prolonged and patient observation that a definite diagnosis is possible. Yet from the point of view of treatment this is all important. Gout is more common in men, but a certain number of cases occur in women, usually of a chronic irregular form. It mostly occurs in the well-to-do and well-nourished. In irregular cases it does not occur suddenly, nor is the onset acute, but possibly there is the previous history of such an acute attack. It is seldom symmetrical, almost never affects the temporo-maxillary joints or back of the neck, and is much more liable to affect the joints of the lower limbs than those of the upper. Owing to the deposits of the biurate in the joint structures the latter are often irregular in size and shape, sometimes being nodular, but they may present almost any appearance. There is no tendency to destruction of the tissues. It is often associated with digestive troubles and irritability of temper, as well as marked depression of spirits. The teeth are usually ground down, whilst the nails may be cracked and marked longitudinally.

Chronic rheumatoid arthritis is more common in women than in men, and amongst the poor and badly-nourished. It usually begins insidiously in one of the metacarpo-phalangeal joints and is not associated with redness or great tenderness. It rapidly spreads to many other joints, giving rise to much crippling and deformity. It is specially liable to affect the temporo-maxillary joint and the back of the neck. There are marked muscular atrophy and often pigmentary and vaso-motor changes. Once a joint is affected there is little tendency to improvement. There is marked symmetry in the joints attacked, but the first symptom can usually be traced to one side. There are no biurate deposits, although lipping and outgrowths may be mistaken for them. The cartilages are ulcerated and there may be much coarse grating. It is not readily affected by the salicylates. Chronic rheumatism never affects the temporo-maxillary joints and is not associated with the formation of bony or cartilaginous deposits in the joints. It exhibits little symmetry and is not progressive. It is usually associated with rheumatic pains and yields to the salicylates in a marked degree.

In certain nerve diseases arthritic changes are noticed and of these tabes may be taken as a type. These changes do not give rise to much trouble in diagnosis, and it is more from the point of view of origin that they are of interest. In them the joint troubles are the result of trophic influences, which alter the joint's nutrition to such an extent as to give rise in some cases even to acute inflammation, but more frequently only to a chronic condition characterised sometimes by much tenderness, at others by none, by ulceration of the cartilages, by fibrous adhesions, and by alterations in the articular ends of the bones. In all such cases a condition of nerve degeneration exists, the result of some serious organic lesion of the nervous system. This degeneration has been found in every case in which it has been looked for, and it has even been found in the nerves of the joints themselves. It was the absence of these changes which first threw doubt on the origin of rheumatoid arthritis, and it appears to me that this in itself is so strong an argument that one can positively say that rheumatoid disease, in the absence of nerve lesions, must originate in some other way.

Senile degenerative arthritis is essentially a monarticular disease, although in some few cases we see two or more joints affected. It is seen in elderly people, especially men, and in most cases as the consequence of some injury more or less trivial. The joint changes are unaccompanied by any vaso-motor or trophic changes, except such as are the result of general malnutrition or disease. Atrophy of the muscles of a limb may often be marked, but we never see any reaction of degeneration, and the muscles usually respond quickly to treatment. This, however, I am sorry to say, is not the case with the arthritis, which is persistent and, if left alone, progressive, ending in the loss of the use of the affected limb. The joints most frequently affected are the larger ones, especially the hip and the shoulder. The movement of the affected joint being limited and painful, the patient is inclined to save it as much as possible. There is grating almost invariably and often shortening. There is little or no swelling visible and no redness. Deep pressure always elicits pain, in the case of the hip most pain being felt in the groin and in the shoulder either in front or on the outer side of the joint. The joints show thickening and chronic inflammatory changes of the synovial membrane, whilst the articulating surfaces are worn down, the cartilages being destroyed in patches and the bone being soft and yellowish from fatty degeneration and absorption of its structure. It presents all the characters of a local progressive degeneration.

It will thus be seen that as our knowledge at present stands arthritic troubles arise in a great variety of ways. There are those due to (1) bacteria themselves acting on the joint structures; (2) bacterial poisons (pulmonary osteo-arthropathy); (3) toxic poisons of as yet an undetermined character (gout); (4) nerve degenerations; and (5) senile degenerations. Of these Nos. 2 and 3 will probably be referred to some other category as further scientific data become available.

Bath.

ON PROTECTIVE INOCULATION AND SERUM-THERAPY.[1]

BY J. L. BUNCH, M.D., D.Sc., M.R.C.P. LOND.

IN speaking to-night of the subject of serum-therapeutics I am speaking of a subject which is now essentially practical—a subject which is no longer of exclusive interest to the bacteriologist and to the purely scientific worker, but one which is of far-reaching importance both to the medical practitioner and to the patient. Within the last few years the treatment of some of the acute infectious diseases has undergone considerable modification and augmentation, with the result that the prognosis has been greatly improved and the mortality, more especially in diphtheria, to a marked degree diminished.

By the injection of certain antitoxic sera it has been found possible to render less fatal and to cut short the attacks of some of the most dreaded diseases, and even, by the methods of protective inoculation, to render the individual insusceptible to certain diseases and artificially to confer on him a more or less permanent immunity. Such immunity or power to withstand the attacks of certain infectious diseases which to others are destructive belongs

[1] A paper read before the North London Medical Society on Feb. 14th, 1901.

from birth to some individuals and to some species of animals, and such an inherited or congenital immunity is to be distinguished from the artificially produced or acquired immunity. Thus congenital immunity against syphilis, scarlet fever, and measles is possessed by all animals except man; in other words, man is the only animal which is susceptible to these diseases. Again, fowls, rats, and pigeons are immune to anthrax, dogs are immune to tuberculosis, and rabbits to glanders. A still minuter subdivision as to susceptibility is seen in the case of mice, inasmuch as white mice and house mice are absolutely immune to tuberculosis and to glanders, while field mice are highly susceptible to both these diseases. In human beings every epidemic shows that some individuals, although equally exposed to infection with others, are not susceptible to certain diseases such as small-pox, measles, or scarlet fever, and it is well known that negroes are less liable to contract malaria and yellow fever than are the white races, though they are more susceptible to small-pox and tuberculosis.

This immunity can, however, be diminished or abolished experimentally. Thus, mere artificial disturbance of metabolism is capable of making animals otherwise immune to certain diseases susceptible to these diseases. It has been shown by Charrin and Roger that rats, which are usually immune to anthrax, lose this immunity after they have been sufficiently fatigued by forced treadmill work. Pasteur and Wagner demonstrated the fact that by artificially lowering the temperature of hens and pigeons, whose body temperature is normally 107° F., by means of baths, they became susceptible to anthrax, while, on the other hand, Gibier showed that by placing frogs in a bath heated to 95° they became liable to infection by anthrax, to which they were otherwise immune. Disturbance of metabolism by starving pigeons either before or directly after inoculation renders them also susceptible to anthrax. If the pigeons are starved for a period of less than eight days and then fed again on their normal diet they regain their lost immunity. In human beings great disturbance of nutrition, whether due to starvation or mental anxiety, also renders them liable to contract contagion in the course of epidemics, and to the latter cause we may also, perhaps, ascribe the frequent occurrence of tuberculosis among prisoners.

Acquired immunity to some diseases can be attained by passing through an attack of the disease, and it is frequently observed that an abortive or very trivial attack often confers immunity as well marked as that following a severe attack. Experimentally this has been often confirmed, and it has been shown that inoculation with a weak culture protects against subsequent inoculation with a virulent culture. The duration of the acquired immunity varies considerably and lasts a considerable time in the case of small-pox, scarlet fever, and measles, whereas in the case of diphtheria, pneumonia, and gonorrhœa, one attack gives, so far as we know, no protection against subsequent infection with the same disease, and in the case of malaria one would be disposed to say that each attack renders the patient more liable to subsequent infection.

As to the causation of immunity many theories have been advanced, and one of the earliest is that of Pasteur and Klebs, which assumes that in the first attack of the disease the substances in the body which are necessary for the growth of this particular organism are used up, so that similar bacteria which secure an entrance subsequently find none of the medium present which is necessary for their development. Against this theory are the facts that the fluids of a naturally or artificially immune animal frequently form an excellent artificial medium for the growth of the special micro-organism to which that animal is immune, and that sera which contain no bacteria are, when inoculated, capable of producing similar immunity.

The theory of Chauveau and Wernich assumes that micro-organisms during their growth produce substances which hinder their further growth and so not only bring the disease to an end but render the patient insusceptible to further invasion by the same bacteria. But the fact that immunity may persist for such long periods renders this theory also improbable.

A third theory, the theory of Buchner and Wolffberg, is based on Darwin's theory and makes the assumption that in small-pox and other infectious diseases the weaker cell-elements are destroyed and only those which are able to resist the specific organism which has caused the disease survive, and, further, that these cells transmit their acquired properties to their offspring, the organism, as a whole, being thus rendered capable of resisting further attacks of the specific disease.

A more widely held theory is that of Metschnikoff who first published his phagocyte theory in 1883. According to this theory certain white corpuscles of the blood and other cells derived from the mesoblast can take up and devour within themselves the invading bacteria. Thus, in the frog anthrax bacilli were seen to be taken up by the cells and to undergo peculiar changes quite different from ordinary degenerative changes, and Metschnikoff was able to obtain a culture from an anthrax bacillus which had thus been taken into a cell, the culture proving to be quite virulent. He found, too, that in immune animals when the bacilli were introduced beneath the skin but protected by means of a cotton-wool covering from the attacks of the phagocytes, they increased in numbers, whereas those bacilli which escaped from the protecting covering were promptly consumed. He assumed that as soon as any infection-producing organism attains access to the body it produces positive chemiotactic substances which attract the bacteria, but in proportion to its virulence it generates poisonous substances which paralyse the activity of the phagocytes and prevent them from devouring the bacteria. When an animal has been rendered artificially immune its phagocytes are able to resist this poisonous substance and to devour the bacteria before they have produced any considerable amount of poison.

In direct opposition to Metschnikoff's theory a theory has been advanced which ascribes to the cell-free plasma and serum of the blood bactericidal properties. Nuttall showed that not only the blood, but also pericardial fluid and aqueous humour of dogs have the property of killing anthrax bacilli. Behring further proved that anthrax bacilli grow well on the blood-serum of animals which are susceptible to anthrax inoculation but cannot be got to grow on the serum of white rats which have been rendered immune to anthrax. He also showed that while one particular serum is fatal to certain varieties of micro-organism it is powerless to inhibit the growth of certain other organisms, and that a definite amount of serum is only capable of dealing with a certain definite number of bacteria, so that if bacteria in excess of this number are introduced they grow and multiply actively. In other words, the immunity thus conferred depends upon the ratio between the number of micro-organisms and the quantity of the substance inimical to their growth contained in the fluid. The nature of these poisonous substances or "alexins" is but little known. They are extremely unstable and cannot be kept intact outside the body for any considerable time, and they are easily decomposed by sunlight and by warming. These alexins, or at any rate the serum which contains them, have a destructive action not only on bacteria but also on red corpuscles and on leucocytes of other species of animals. From these and other characteristics it seems probable that alexins are of the nature of proteids. According to Ehrlich the action of antitoxins is brought about by their chemical combination with toxins, much as an acid combines with a base. The French school, on the other hand, hold that the action is essentially a "vital" one.

Ehrlich has described the existence of a series of bodies or "toxoids," which, like toxins, have an affinity for antitoxin, but which differ from toxin in their valency for antitoxin. These toxoids can be divided up into three classes—the epitoxoid or toxone, in which the valency for antitoxin is less than that of the toxin; the syntoxoid, in which it is equal; and the protoxoid, in which it is greater. An attempt has been made to combine this last humoral theory with the phagocytic theory of Metschnikoff by supposing that the phagocytes do not themselves directly take into their substance and devour bacteria, but that they secrete the poisonous materials which are capable of inhibiting their activity and ultimately bringing about their death. Some experiments of Buchner afford strong confirmatory evidence of this theory. By suitable chemical stimulation he was able to cause the secretion into the pleural cavity of rabbits and dogs of leucocyte-containing exudations which possessed bactericidal powers stronger even than those of the blood or serum of the same animal. Under these conditions however, phagocytosis could be observed to be proceeding actively, and the question immediately arose as to how far the bactericidal qualities of the fluid depended upon phagocytosis and how far upon the contained alexins. This question was settled by freezing the fluid, and by this means killing the leucocytes but not injuring the alexins, and then again testing its bactericidal powers. These were found to be in no way

diminished, and, inasmuch as the leucocytes had been killed, the capacity of the fluid to destroy bacteria must necessarily depend upon the contained alexins. But even if phagocytosis is merely a secondary phenomenon, and the destruction of bacteria is brought about by poisonous substances circulating in the fluids of the body, there is a considerable amount of evidence which goes to show that these poisons are secreted by leucocytes. The influx, therefore, of these white corpuscles to an infected area means an increased secretion of substances poisonous to the invading micro-organism and increased powers of resisting disease, but according to this theory it is immaterial to the patient whether the disease be combated by thus inducing an active leucocytosis or whether a sufficient supply of the bacterium-killing substance which is normally manufactured by leucocytes be directly introduced into his tissues.

In discussing the practical application of these principles to the treatment of disease I would lay stress on the fact that the advances of science, like those of nature, are slow, and that the marvellous discoveries which are only introduced to the public in their completed form, and then appear, like Pallas Athene, to have leapt fully developed from the head of their creator, can, on closer examination, be traced through all the stages of their gradual development. Though, to the romantic imagination, the falling of an apple, the swinging of a church lamp, and the flowing of water from a bath revealed to Newton, to Galileo, and to Archimedes respectively the secrets of nature, nevertheless truth compels us to recognise that these secrets were only unravelled by ceaseless striving and by strenuous work, and that only by such means can future advances in the field of research be accomplished. Thus we can trace back to far distant times the first attempts at preventive inoculation. It was early recognised that certain diseases only occur once in the life of the individual and that he is in future protected against attacks of the same disease. From this it was but a short step to the artificial production of such diseases, especially when it was found that in the case of small-pox a mild form of the complaint could be induced by the inoculation of the contents of a pustule in a healthy subject, and that such an inoculation was as effectual a safeguard against the possibility of contracting the disease in future as a severe attack of small-pox resulting from contagion. It is probable that this method of artificially inoculating small-pox was known and practised thousands of years ago by the Indians and Chinese, and in the Middle Ages it was certainly a common practice. It was not, however, until the year 1721 that the method was introduced into England from Turkey by Lady Wortley-Montagu, the wife of the then English ambassador to Constantinople. It met with very considerable opposition, and rightly, for, in spite of its undoubted protective powers, individuals thus inoculated, even if they themselves only experienced a mild attack of the disease, formed each a focus from which others might become infected, and in these latter there was no certainty that the complaint would always run a favourable course. In 1798, however, Jenner published his account of the protective action of cow-pox against small-pox, a method which was already fairly well known, and of which a description had been given by Fewster and Sutton, but which had not as yet met with general acceptance—and it is well known that the application of this method as a result of Jenner's teaching has practically stamped out small-pox in those districts where the practice has been universally carried out. It must, nevertheless, be always remembered that the protection thus obtained is not permanent. The essential principle which underlies such vaccination is that when the disease is passed through animals which are little susceptible to it a vaccine is obtained which causes but slight reaction in the first species of animal and yet protects against the disease. In an exactly similar way to Jenner's small-pox method the virus of the swine fever when passed through rabbits gives rise to an attenuated virus which in swine is protective against swine fever, and the employment of this vaccine has enabled epidemics of swine fever in some localities to be stamped out. Attenuated cultures which can be used as vaccines can also be obtained by exposing the cultures to temperatures above those at which they grow best, by exposing them to sunlight, increased pressure, or electricity, or by the addition of chemicals such as carbolic acid. Thus anthrax vaccine is obtained by growing the cultures for different periods at a temperature of 43° C., and inoculating first a weak culture and then more virulent ones. By this means the mortality from anthrax for two corresponding periods of three years was in one country reduced from 2·3 to 0·5 per cent.

The method of attenuating cultures by means of drying is made use of in the treatment of rabies. Pasteur showed that the introduction of a portion of the central nervous system of a mad dog beneath the dura mater induced rabies, also that the unknown virus could be increased in virulence by passing through rabbits. After a virus of maximum virulence has been obtained it is attenuated by drying over caustic potash and for each day of drying it loses an appreciable amount of virulence the extent of which can be foretold. Thus an emulsion of a spinal cord which has been dried at a temperature of 72° C. for from one to four days causes rabies seven days after inoculation; a cord which has been dried for five days does not produce any symptoms until after a still longer period; while a cord which has been dried for 14 days produces no symptoms. The patient under treatment is first inoculated, if the case is not an urgent one, with a weak virus, and afterwards with vaccines of increasing virulence, so that he becomes immune against subsequent inoculation with even large doses of the same virus and against subsequent manifestations of symptoms of rabies even if he had become infected before the treatment was commenced.

Instead of inoculating with attenuated cultures of micro-organisms protective inoculation can in some cases be attained by injecting the products of metabolism of these micro-organisms which are formed during their growth, or again by inoculating bacteria of a different kind or even extracts of the bacteria themselves. Of the latter the best known is tuberculin, which is essentially a watery or glycerine extract of tubercle bacilli and contains bacterial proteins. The bitter disappointment to which tuberculin has given rise depends largely on the fact that its action is not specific, but merely resembles that of proteins obtained from other bacteria. This action has been described by Buchner as consisting of cell proliferation, leucocytosis, increased lymph secretion, and, in man, of inflammation either round the site of inoculation or, in the case of the easily absorbed tuberculin, round those spots where a considerable number of tubercle bacilli happen to be situated. Not only can such a reaction be obtained by the injection of proteins other than those derived from tubercle bacilli, but also from bodies varying largely in chemical composition, such as kreatin, kreatinin, acetone, and taurin. A further proof that the action of tuberculin is not specific is that it produces the same local reaction in infectious diseases which are not tuberculous in origin, such as actinomycosis and leprosy. Tuberculin has, of course, a certain favourable action on some cases of tuberculosis, inasmuch as it induces inflammation round already diseased foci, and so leads to the death of the tubercle bacilli, but this is in most cases not sufficient for the cure of lung tuberculosis, because the infection is a mixed one, and streptococci and other organisms are also present. In fact, the latter stages of lung tubercle are practically stages of septicæmia. Streptococci and staphylococci are present in large numbers in the blood and the case is far beyond the power of tuberculin or anything else to cure. As a method of diagnosing tuberculosis in cattle tuberculin has been freely used. Bang of Copenhagen reported that in Denmark out of 8401 animals 3362 reacted to tuberculin, but, as it was impossible to kill off all the infected animals the method was adopted of taking the calves from their mothers and from the stalls as soon as they were born and feeding them on boiled milk. Injections of tuberculin some weeks afterwards gave no reaction in these same calves, so it seems that the remedy was effectual. As to how much importance we must attach to the question of the conveyance of tuberculosis by milk I do not now propose to inquire, but in this connexion I may quote a recent statement by Dr. Poore, that in a herd of cows belonging to one of the most illustrious families of the kingdom 38 out of 40 cows were found to be tuberculous, and yet there are three generations of this family living, and no family is more free from the infection of tuberculosis. A protein body similar to tuberculin is mallein, which is obtained from the bacillus of glanders and is used in the diagnosis of glanders in animals. Here, again, its action, like that of tuberculin, is not specific, as has been abundantly shown experimentally.

The attempts to bring about satisfactory protective inoculation which have attracted most attention recently are undoubtedly those connected with typhoid fever. In the case of soldiers proceeding to the Cape it was certain that

many of them would be exposed to infection from enteric fever, and by inoculation of a small amount of a dead culture of the typhoid bacillus it was hoped that they would be protected against infection from enteric fever and an "active" immunity to the disease established. The following method was employed by Wright of Netley. A virulent broth culture of the bacillus is grown at 37° C. for about a fortnight and is then kept at a temperature of 60° C. or more until it is sterilised, and a quantity of lysol added equivalent to 0·5 per cent. On decanting the contents of the flask a clear sterile fluid is obtained which contains the soluble more or less poisonous substances formed by the bacteria during their growth and also the soluble remains of the bacteria themselves. Subcutaneous injection of five cubic centimetres of this fluid will kill a guinea-pig weighing 250 grammes in less than 20 hours. The amount used for the inoculation of human beings is two-fifths of the quantity which would be fatal to a guinea-pig weighing 250 grammes. A second dose of double the quantity may be given a week afterwards. The injection may be given in any spot where the subcutaneous tissue is loose, and Foulerton recommends keeping the patient at rest for the next 24 hours after inoculation. The symptoms following inoculation he describes as consisting of frontal headache, shivering and even rigors, syncope, and shooting pains. The lymphatic glands enlarge, and there are œdema and cellulitis round the site of inoculation, coming on about 18 hours after vaccination at the time when the other symptoms are disappearing. The temperature rises very soon after the injection and attains its maximum about 12 hours afterwards, but it very soon falls again to normal. In a patient, on the other hand, who had been already infected with typhoid fever five days before vaccination only an insignificant rise of temperature occurred as a result of the vaccination. Such an injection, then, of a dead culture of the specific bacillus protects against subsequent infection with the same bacillus, and the serum of the inoculated person acquires at the end of the week curative powers, and also agglutinative powers greater than those conferred by passing through an attack of typhoid fever. Thus, the agglutinative action can be obtained with the serum of an artificially immunised animal even when it has been diluted 1000 times, while the serum of a patient who has recently recovered from an attack of typhoid fever will not react when it is diluted more than 300 times. It has also been shown that the serum of a patient convalescent from enteric fever has less power to confer passive immunity on a guinea-pig than the serum of an artificially immunised animal. When a patient has been inoculated, his serum should be examined a week afterwards, and the inoculation cannot be considered satisfactory unless clumping occurs quickly with a dilution of 1 in 50. Foulerton found that 45 per cent. of some cases which he examined as long as two years after inoculation still showed a definite reaction.

The statistics dealing with the results of anti-typhoid inoculation are as yet very meagre. Wright published last year a report dealing with some 11,295 individuals in India, of whom a quarter of the number were inoculated against typhoid fever. Of the inoculated, 0·95 per cent contracted typhoid fever, as against 2·5 per cent. among the uninoculated; the mortality among the inoculated only amounted to 0·2 per cent., while among the uninoculated it reached 0·34 per cent. On Feb. 9th, 1901 Wright published the official report dealing with the effects of anti-typhoid inoculations in the 15th Hussars, stationed in India between October, 1899, and October, 1900. 539 out of 718 were inoculated, and among these the incidence of typhoid fever was represented by 0·55 per cent. and the mortality by 0·27 per cent.; while the incidence in the uninoculated was 6·14 per cent., and the death-rate was 3·35 per cent. Assuming that some of the inoculations were unsuccessful, as they almost certainly were, these figures are distinctly in favour of inoculation, but there is still a certain lack of unanimity in praise of the treatment, and Ryerson has reported the case of an officer at the Cape who was inoculated twice and yet developed the disease. In any case further statistics are necessary before any definite conclusions can be satisfactorily arrived at.

Various methods of protective inoculation can, then, be employed, some with greater success and some with less, but the "active immunity" which is thus brought about is not an instantaneous affair—it requires a certain time for its accomplishment, it cannot be hastened, and it must be performed before the patient has become infected with the disease. In the case of rabies it is true that the disease can be arrested if protective inoculation is employed during the incubation period, but the method of action of the inoculated virus is totally unknown and we are absolutely in the dark as to how far this method is analogous to the others which I have described.

It is, however, the question of cure or arrest of an already developed infectious disease which to us has the greatest interest, and it is with the name of Emil Behring that we must associate the chief advance in this direction. Other observers, and notably in our own country Sidney Martin, have advanced our knowledge of serum therapeutics very considerably, but it was in 1890 that Behring first published, in conjunction with Kitasato, his researches on diphtheria immunity. He showed that the blood and cell-free serum of animals which had been artificially rendered immune to diphtheria and tetanus possessed the power of rendering harmless the poisons which these bacilli generated in their growth. Thus the serum of a rabbit which had been rendered immune to diphtheria by infection of attenuated diphtheria cultures was able to protect other animals against diphtheria even when they had developed marked symptoms of the disease. The action of this antitoxin was so undoubted, the method so simple, that its application to diphtheria in man followed quickly, and the work of Ehrlich and others soon made it possible to calculate the potency of the serum and the exact amount of the dose necessary. Although the antitoxin was capable of neutralising the toxin generated by the bacilli and circulating in the blood-stream it had no power to destroy the bacilli; these still grew at the point of infection, but the changes which had been brought about by the injection of the serum caused the localised process to be shut off from the possibility of spreading and the animal to become insusceptible to the action of the diphtheria poison. It is of the greatest importance to remember that antitoxin serum has no reparative action, nor can it regenerate cells which have already undergone katabolic pathological changes, and, moreover, that a certain amount of antitoxin can only neutralise a certain fixed amount of toxin. It follows from this that it is necessary to commence the treatment at the earliest possible moment when there is a minimal amount of toxin already in the circulation, and seeing how innocuous its employment is, a large dose of serum should be given at the earliest possible moment in every case of diphtheria. An initial dose of not less than 6000 units should be injected subcutaneously, with, of course, antiseptic precautions, and this should be followed by a second dose if necessary. Roux and Martin showed that if streptococci were injected with the diphtheria serum the disease ran a far more deadly course, and, in the case of animals, if treatment was not commenced within six hours of the onset of this mixed infection, the animal infallibly died. Where, however, pure anti-diphtheritic serum was employed, and a sufficient dose was injected into the animal, it was found to be absolutely protective against subsequent infection with diphtheria, and, even if the dose of serum was too small to be quite efficient, the disease took longer to develop and the animal only died at the end of several weeks. In man the employment of anti-diphtheritic serum has given excellent results. Thus Sidney Martin and Hunt showed that in University College Hospital, for the years 1896 and 1897 its use had reduced the mortality of diphtheria from 28 per cent. to 17 per cent., and the report of the Metropolitan Asylums Board for the year 1899, dealing with some 7000 cases in the year, gave the mortality of cases treated with antitoxin as 15·38 per cent., and of all diphtheria cases, both those treated with antitoxin and those not, as only 14·05 per cent.

The treatment of plague by means of antitoxin serum has proved most successful in the hands of Calmette and some other observers. Thus, at Oporto during September, October, and November of last year 142 patients were treated with serum and only 22 died. The mortality amongst those treated with anti-plague serum was therefore only 15 per cent., as compared with 63 per cent. among those not so treated. The serum used was obtained by injecting into horses first cultures of plague bacilli killed by heat and afterwards living and virulent cultures. After an active immunity had been established in the horse some blood was drawn off and the serum was heated for a time to 58° C. The alexins of the serum are destroyed by this temperature, so that only the "reacting substance" is injected into the patient, which acts upon the leucocytes in proportion as the serum is absorbed, in conjunction with the natural alexins.

of the body. But it is very important that these two processes shall go on at the same time and as rapidly as possible, so Calmette insists on the necessity of injecting the serum directly into the circulation. 20 cubic centimetres of anti-plague serum are injected into a superficial vein of the patient's hand, forearm, or leg as soon as a case of plague is suspected without waiting for the results of bacteriological examination. If the fever does not subside completely in 24 hours, and if the diagnosis is confirmed, another injection of 20 cubic centimetres of serum must be given into a vein. These injections are absolutely harmless, and if care is taken to warm the serum to body-temperature before injection the patient experiences no discomfort from the injection. Serum injection is equally efficacious for the prophylaxis of plague in localities already infected, but unfortunately the protection afforded is not a very lasting one, and the injection must be renewed at the end of a week. Prophylactic injections need not, however, be given intravenously; a simple injection of 10 cubic centimetres under the skin of the abdomen is quite efficacious. Above all, the serum presents the immense advantage of conferring immunity in a few hours, so that we have here a method of treatment which may not only prove to be of great service in the prevention of plague, but also in arresting its progress when it has already developed.

Antitoxin treatment has also proved of service in tetanus, typhoid fever, and snake-bite, and there is every reason to hope that in the future we shall, by its means, be still further able to control and cure those few cases of infectious disease which have not been entirely prevented by suitable protective inoculation.

Wimpole-street, .

PERSISTENT METRORRHAGIA.[1]

BY J. INGLIS PARSONS, M.D. DURH., M.R.C.P. LOND.,
PHYSICIAN TO THE CHELSEA HOSPITAL FOR WOMEN.

THERE are certain well-recognised causes for metrorrhagia, such as fibro-myoma, polypus, retained products of conception, diseased appendages, cancer, &c. These cases are usually recognised and their treatment is fairly well defined if some differences of opinion are allowed for. It is not my intention to discuss these obvious causes now, but to consider another class of case which is not very uncommon and about which very little is said in the text-books—I mean metrorrhagia which is not brought about by any of these causes and for which, in fact, there is no obvious cause. Even when we examine these patients under an anæsthetic we fail to find anything wrong in the pelvis, and when we dilate the uterus there is nothing apparent to account for so prominent a symptom.

Under these conditions the indication is to use the curette. If the endometrium which is scraped off is found to be thickened the curetting does good and the metrorrhagia usually stops, at any rate for some months. On the other hand, in a certain number of cases we find very little thickening of the endometrium, and then the metrorrhagia will often persist and perhaps be worse after the curetting than before. In such cases I have been able to stop the hæmorrhage permanently by the use of the constant current. I wish to advocate this method of treatment in preference to the risk and mutilation involved by hysterectomy. As I have never removed the uterus for this condition I cannot say much on the pathology of the subject beyond some observations on the morbid anatomy of the endometrium obtained by curetting.

With the first class of case, which is the most common and which usually gets well after curetting, we find under the microscope that the endometrium is considerably thickened by an excessive glandular proliferation. With the second class of case, which I am more particularly dealing with and where the metrorrhagia persists after curetting, we find a proliferation of the connective tissue in the endometrium, while the glands may be decreased in number. The condition, in fact, corresponds to that described by Wyder of Berlin as "interstitial endometritis" and which he found to be present in the endometrium of bleeding myoma.

When curetting, the use of ergot, and other methods of treatment failed I decided to try the effects of the constant current before doing hysterectomy. As I have seen some of the worst cases of hæmorrhage from fibro-myoma become perfectly regular and remain so for years from the use of electricity properly applied I expected and obtained just as good results in these cases. The similarity in the morbid condition of the endometrium to myoma rendered it probable that electricity would be effective. Another reason in its favour was that the cavity of the uterus is not distorted in shape as it often is in fibro-myoma, consequently it is much easier not only to pass the electrode but also to apply it thoroughly to the cavity of the uterus. In the two cases which I bring before you as examples the hæmorrhage was completely stopped by the constant current, although curetting and all other treatment had entirely failed.

The applications are made by means of a platinum electrode, with a moveable insulating sheath. This is passed up to the fundus of the uterus, while the insulating sheath is adjusted so as to reach just beyond the internal os. As the bleeding comes from the body of the uterus it is absolutely essential to success to see that the current comes off in the body of the uterus and not in the cervix. A clay pad is placed on the wall of the abdomen just above the pubes and connected to the negative pole, while the intra-uterine electrode is connected to the positive pole. At the first application only a mild current should be used, not more than 50 milliampères, subsequently it can be slowly raised until the galvanometer indicates from 75 to 100 milliampères. This is kept on for 10 or 15 minutes. The patient need not lay up during the treatment and except in extreme cases can come to her medical man's house for the treatment. The applications are made twice a week. An antiseptic vaginal douche should be used every day, morning and evening. I need hardly say that the electrode must be absolutely clean and should be placed in an antiseptic solution like any other instrument before being used for operation.

The number of applications required will vary according to the severity of the case. Whatever the number required to reduce the loss to normal proportions, half that number must in addition be given in order to produce a permanent result. The treatment is suspended for a week during menstruation and if at the end of that time the loss has not stopped it should be disregarded and the treatment continued. In some of these cases where the loss is persistent and never stops there is some difficulty in knowing the proper date for menstruation. By closely questioning the patient we shall generally elicit the fact that for one week every month the loss is greater than during the other three weeks. We may take that as an indication of the normal time for menstruation. As a rule no improvement begins until several applications have been made, then the loss begins rapidly to diminish. With a current of 75 milliampères properly applied and slowly raised the patient feels very little, if any, pain. The sensitiveness of the uterus which is usually present at first goes off after two or three applications.

CASE 1.—A woman, aged 32 years, was admitted into the Chelsea Hospital for Women on Dec. 17th, 1898, complaining of profuse loss at the periods, which had so weakened her that she was unable to earn her living. She had had one child five years before and up to that time there was no difficulty with menstruation. Since the birth of the child the loss had gradually increased until she used from 30 to 40 diapers, while the interval was less than formerly. There was practically no pain during menstruation. She had never had a miscarriage. Her general health was good except that she felt very weak from loss of blood and was incapable of much exertion, although she used to lead a very active life. On examination the heart and lungs were found to be normal. The right kidney was slightly moveable. The uterus was found to be in position and not enlarged, and the mobility was unimpaired. The cervix was slightly eroded, with more discharge than usual. The appendages appeared to be healthy. On Dec. 22nd, under ether, the uterus was curetted and swabbed over with solution of perchloride of iron and tincture of iodine. On the 24th the loss still continued. On the 29th the loss stopped. On Jan. 9th, 1899, menstruation began, when the loss was worse than before and showed no signs of improvement. On Feb. 16th the first application of the constant

[1] A paper read before the Harveian Society of London on Feb. 7th, 1901.

current was made, 65 milliampères being used for 15 minutes with the positive pole in the uterus. In all 12 applications were made, the strongest current used being 100 milliampères and the weakest current 50 milliampères. In April for the first time for many years the patient had a normal period. It lasted only four days and she only used 10 diapers. She has remained up to this date perfectly well; she is in good health and is able to earn her living, and she never loses more than normal.

CASE 2.—A single woman, aged 35 years, was sent to me by Dr. J. Thoresby Jones in July, 1899. She had never had a child or a miscarriage. In 1898 she began to lose more at the periods and also had some loss between them. This continued to increase until she found it necessary to have something done. She was taken, in October, 1898, to one of the leading specialists in London who curetted the uterus. The loss stopped for two weeks and then went on as before. She waited for eight months, but as there was no improvement and she was becoming worse she consulted Dr. Jones who brought her to see me. I found her a stout, healthy, well-grown woman who had enjoyed good health until the metrorrhagia began. On examination the uterus was found to be in position and to be normal in size, the sound passing for two and a half inches without pain. There was no tumour to be found and the appendages were normal. There was no erosion of the cervix and very little white discharge. The bowels were sometimes confined. 23 applications of the constant current were made with the positive pole within the uterus, with an average strength of 75 milliampères, for 10 or 15 minutes at a time. The loss had completely stopped after 15 applications. Experience, however, has taught me that in these cases, as well as in hæmorrhage from fibro-myoma, it is necessary after the loss is stopped to go on with the applications for a month or so if we wish to produce a permanent result. After the treatment was finished menstruation ceased for three months and she had no loss at all. Since then she has been quite regular and loses very little.

I will not weary you with any more cases, as these two are typical of the condition. The cause appears to be obscure. I was at one time inclined to think that the disease dated from a miscarriage, but the patient in Case 2 had never had a child or a miscarriage. There is, however, one factor in common with all these cases—viz., that the patients are either single or that, if married, they have remained sterile for some years. Now this is what we also find precedent to the appearance of fibro-myoma. In fact, my colleague, Mr. J. Bland-Sutton, states that there is an excess of fibrous tissue in the walls of the uterus although there are no actual fibroid tumours.

The constant current would appear to stop the hæmorrhage by means of its caustic action on the endometrium and the hæmostatic effect of the positive pole. If a small current is applied with two fine needles to the web of a frog's foot and watched under the microscope coagulation and stoppage of circulation can be seen in the capillaries round the point of the positive needle, while at the negative pole nothing is to be seen beyond a collection of hydrogen bubbles. In addition to this hæmostatic action the muscular wall of the uterus is toned up by the current just as much as the voluntary muscles are when electricity is employed to restore their tone after temporary paralysis. In connexion with this it may be worth while to mention that several patients have remarked to me voluntarily that after the course of electricity the constipation from which they had previously suffered had disappeared, although the treatment had been given solely with the purpose of stopping menorrhagia.

There is one other course of menorrhagia which I should like to refer to—viz., retroversion. On several occasions patients have been brought to me for menorrhagia which persisted after curetting, and having found the uterus retroverted I replaced it and kept it in position with a well-fitting Hodge pessary. At the end of two or three months the menorrhagia disappeared without anything else having to be done. There are, of course, many cases of retroversion which give rise to no symptoms and require no treatment, but, on the other hand, there are also many cases where the condition makes a woman's life a misery to her. She complains of constant pain in the back, worse on walking, and if there is much standing with bearing-down pain. During menstruation the uterus is very tender and she can hardly bear to be touched and she often has a sickening pain when the bowels act. In addition to this in about 30 per cent. of these cases there is menorrhagia. To my mind if there is no erosion and nothing else to account for the hæmorrhage the first indication is to replace the uterus in its proper position and keep it there. With the large majority of patients the menorrhagia will then cease in two or three months; if it does not then curetting should be done. But I maintain that it is of no use to curette a retroverted uterus for menorrhagia unless we keep the uterus in its proper position afterwards.

Queen-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ABSCESS DUE TO APPENDICITIS SIMULATING STRANGULATED INGUINAL HERNIA.

BY J. B. PIKE, M.R.C.S. ENG., L.R.C.P. EDIN.,
HONORARY SURGEON TO THE LOUGHBOROUGH GENERAL HOSPITAL.

LATE in the evening of Jan. 7th I was requested by Dr. G. Cardno Still of Shepshed to meet him in consultation as to a case of abdominal obstruction. I am indebted to Dr. Still for the history of the case up to that time and for permission to send it for publication.

The patient was a fairly-nourished man, aged 35 years. About three years ago he had a bad attack of pain and vomiting, a repetition of previous slighter attacks, and some six months after this, when he had been sneezing, he noticed a lump in the right groin, which receded when he lay down, unless he happened to be lying on his right side. On Jan. 5th he was seized with severe pain and vomiting, which during the next day became stercoraceous. This continued, with complete obstruction, until the afternoon of Jan. 7th, when after an injection he passed some scybalous masses, fluid fæces, and wind. On the evening of this day, when I saw him, he was lying flat on his back, had a very quick running pulse, a distended and somewhat tender abdomen, and a distinct fulness in the right inguinal region. The external ring on that side could not be distinctly felt and the canal gave the impression of being filled with a small oblong mass with rounded edges along which no impulse was conveyed on coughing. It seemed imperative to explore this tumour, and for that purpose the patient was removed to the Loughborough Hospital. Ether was given and it was now possible to make out the external ring and that some substance was blocking the canal. The right side of the scrotum was noticed to be reddened. The condition of the patient now became so alarming that operation was reluctantly abandoned, and, fully recovering from the anæsthetic, he died a few hours after.

A partial post-mortem examination was made with the following result. The inguinal fulness and the scrotal blush still remained. On laying open the inguinal canal a somewhat dense sac was found, and on this being opened pus flowed out in large quantity. The sac was occupied by the thickened and infiltrated spermatic cord and there was no trace of bowel or omentum. Through the internal ring there was a communication with a large perityphlitic abscess, evidently due to appendicitis. There was general peritonitis and it was evident that a perforation had taken place on the 5th, which admitted pus into the peritoneal cavity. The sequence of events was therefore appendicitis, chronic abscess bursting into the inguinal canal and simulating hernia, perforation, and peritonitis.

The case is chiefly interesting from a diagnostic point of view. The anomalous points were that the swelling recurred on lying on the right side and that symptoms were not much relieved by the effect of the injection. These were, so far as I can see, the only things which made strangulated hernia improbable, as latterly the swelling was irreducible. No doubt the recurrence of swelling when lying on the right side was due to the pus gravitating down the canal when it became a low-lying point. Whether I should be able to

diagnose a second case of this nature I doubt, but I think the history of it gives some points of diagnostic value.

Loughborough.

A CASE OF AUTO-VACCINATION.

BY GEORGE H. ORMSBY, M.R.C.P. IREL., &c.

THE accompanying illustration shows a novel effect of vaccination on a patient at present under my care.

A married man, aged 45 years, while at work on Sept. 14th, 1900, got a slight scratch on the outer angle of the right eye. About a week previously I had vaccinated his child. His wife being ill he was obliged to take the child at night, the result being that matter from the arm inoculated the scratch. I first saw him on Sept 24th and the following day had a photograph taken. His eye was completely closed

and was very painful and irritable. His symptoms the same night were so suggestive of septic poisoning that I asked Mr. F. MacDougall to see him with me. By the following morning, however, he was much better and continued to improve steadily. The dark ring round the eye is owing to its being painted with iodine.

Mr. MacDougall tells me that during his extensive experience as "public vaccinator" he has never seen a similar case.

Runcorn.

NASAL DIPHTHERIA MASKED BY MEASLES.

BY WILLIAM WYLLYS, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

I HAVE had under my care a patient whose illness in some respects resembled the case of diphtheritic paralysis reported by Dr. A. J. Rice Oxley[1] where only a slight sore-throat had been complained of and some difficulty had been experienced in diagnosing the condition of the patient. My patient, a boy aged five years, had been suffering from a typical attack of morbilli, his little sisters, aged three and two years respectively, being at the same time similarly affected. The only suspicious circumstance was the protracted and obstinate nature of the nasal catarrh, which was purulent, and in the case of the elder girl had existed for two weeks prior to the appearance of the measles rash. In no instance was sore-throat complained of nor was any membrane found in the fauces. The two girls made a perfect and permanent recovery, but the boy about a week after the subsidence of all symptoms and signs of measles became so weak and debilitated that I ordered him back to bed. In a few days, however, he appeared better and was allowed to get up, and as the weather was fine he was able to go out of doors about a week later, when he walked to my house though still obviously weak. Ten days afterwards his father carried him to me, as he said that the child seemed to have lost the use of his legs, toppling about when trying to walk, and that his head drooped to the left side. I accordingly once more ordered him to bed, and on my visit next day I found that he had a cough of a clashing, hollow character, which was quite ineffective in bringing up any phlegm, though after repeated paroxysms he retched and expelled mucus and food through his nose. My suspicions being aroused I examined his palate and found it to be paralysed as were also the muscles of extraordinary expiration. The patellar tendon reflexes could not be elicited and his pupils were dilated and sluggish to light. His expression was vacant and there was left internal strabismus. Bronchitis supervened, and though of itself not of a serious character it was rendered so by the impaired expiratory power. The boy's condition soon became critical, the repeated paroxysms of cough, coupled with the sitting posture occasioned by orthopnœa, telling severely upon the circulatory system. The treatment consisted of gradually increasing doses of liquor strychniæ and liquor ferri perchloridi three times a day and friction of the chest muscles with camphorated oil. Under it the child's condition improved so much that in three weeks he could sit up comfortably in bed and play with his toys. Two further attacks of catarrhal bronchitis occurred and, though obstinate, were satisfactorily dealt with by stimulant expectorants and the use of the steam-kettle. The boy's hearing was markedly impaired on both sides during convalescence, but gradually improved, as did his power of deglutition, and the "twangy" nature of his voice diminished. As paresis of the chest muscles persisted and the legs were much wasted, and the knee-jerks were still absent at the end of six weeks, massage for 30 minutes followed by galvanism was employed once a day for a fortnight and a rapid improvement was soon manifest, the boy's respiration becoming more natural, and, the use of his legs returning, he was able to walk a little, though in a tottering way. A year has elapsed, and he now enjoys very fair health except for occasional bronchitic attacks. He walks and runs well, his hearing is normal, he speaks with but a slight nasal twang, the thoracic movements are good, the knee-jerks have returned though only in a minor degree, and the strabismus is only obvious when he is over-tired.

The chief interest in this case centres in the fact that the patient undoubtedly had nasal diphtheria coincidently with measles, and that although his sister had a far worse purulent nasal discharge both during and before her attack of measles she developed no post-diphtheritic paralysis. The rarity of the concurrence of diphtheria with measles makes these notes worth publishing.

Great Yarmouth.

[1] THE LANCET, Feb. 2nd, 1901, p. 321.

INFECTIOUS DISEASES NOTIFICATION ACT.—At Falmouth on Feb. 11th a man was fined £1 3*s.* 6*d.* for not notifying that his child had scarlet fever. The medical officer of health stated that three other cases of fever were traced to this one. The defence was that a medical man was not required for such a trifling case.

PLYMOUTH MILK SUPPLY.—At the meeting of the Plymouth Borough Council held on Feb. 11th it was decided that the medical officer of health be authorised to issue annual certificates to dairy farmers residing either within or without the borough who supplied milk, cream, and butter to the inhabitants of Plymouth and who were willing to have their farms inspected. A list of dairy farmers to whom certificates shall have been granted will be published for the information of the residents of Plymouth every three months. This seems a wise decision of the council, for the recent typhoid fever outbreak at Plymouth was traced to contaminated milk. 88 cases occurred, 11 of which terminated fatally.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriis collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. MARY'S HOSPITAL.

TWO CASES OF "INTERSCAPULO-THORACIC" AMPUTATION FOR SARCOMA OF THE SHOULDER.

(Under the care of Mr. H. W. PAGE.)

THE chief value of Berger's method of complete removal of the upper extremity with the scapula consists in the early ligature of the subclavian artery, by which the loss of blood is minimised, and therefore the amount of collapse resulting from the operation is greatly reduced. For to collapse and to sepsis must be attributed the very heavy mortality which formerly followed attempts to remove the scapula with the arm, and of these two causes the collapse was probably the more potent. The mortality of interscapulo-thoracic amputation is not very great; Berger[1] has collected 46 cases in which the operation was performed for malignant disease of the upper end of the humerus, and only two of the patients died in consequence of the operation, a mortality of less than 5 per cent.

These two cases were in the hospital about the same time and had so many points of resemblance that they may be fitly recorded together.

CASE 1.—A man, aged 40 years, was admitted into St. Mary's Hospital on Dec. 11th, 1899. Over the outer end of the spine of the right scapula was a soft fluctuant swelling of the size of a small orange. It was painful and tender and the skin was much inflamed. The history was one of indefinite pain in the region of the shoulder for something like two years with a small swelling, which had latterly increased in size, for the past four months. Only recently had it become red and tender. In early life he had had an attack of acute rheumatism, and rheumatic pains had troubled him from time to time since, so that the diagnosis with which he came to the hospital from the medical man who sent him—viz., of inflamed bursal cyst connected with the joint—seemed entirely reasonable. To this at first Mr. Page inclined, but it was an ominous fact that the edge of the scapular spine was at one point deficient as if from erosive destruction. It was thought, moreover, that a tuberculous element might possibly be present in the inflammation, the patient's father having died from phthisis. On Dec. 12th the tumour was laid open by free incision and there was evacuated from a cavity with distinct wall or capsule between the trapezius and supra-spinatus muscles a soft, friable, exsanguine substance, pale in colour, the nature of which it was impossible to determine by naked-eye appearances. Some thought it looked like degenerating tuberculous granulation tissue, others that it was unquestionably sarcoma. In favour of the latter view was the destruction of the bone, but against it was the singular absence of bleeding at the operation. The wound was closed and quickly healed, but the microscope having revealed a round-cell sarcoma the necessity for early amputation was submitted to the patient. He declined any interference before Christmas and returned on Jan. 8th, 1900, with a condition of things much altered for the worse. A few days after leaving the hospital on Dec. 23rd he had noticed a small lump at the site of the operation scar, and this had steadily increased so that there was now a definite tumour over the spine of the scapula measuring two and a half inches in the vertical by three and a half in the transverse direction. No glandular enlargement was to be found. Further delay was out of the question, and accordingly on Jan. 9th, with the help of his colleague, Mr. A. J. Pepper, Mr. Page removed the whole upper extremity by the method of Paul Berger. The upward extension of the growth involved the necessity of prolonging the incision over the trapezius, but with this exception the operation followed the lines laid down by Berger. There had been no difficulty in securing the subclavian vessels after resection of an inch of the centre of the clavicle and the remainder of the operation was free from hæmorrhage. Towards the close it was deemed advisable to give a subcutaneous injection of strychnine and brandy by the rectum, but the patient really bore the operation wonderfully well and neither then nor afterwards was there any degree of shock sufficient to excite alarm. For several hours he suffered intense pain from the divided nerves and it was imperative to give him morphine. The wound healed by first intention and the temperature was throughout normal. As regards the operation this may further be said, that a considerable portion of the trapezius muscle was removed and likewise every particle of adjoining fascia. Very careful inspection, moreover, was made of all the exposed tissues and there was no suspicion of any growth having been left behind. Nevertheless, the poor fellow was not long free from trouble. As early as Jan. 24th there was a suspicion of one or two small nodules being present in the quondam supra-clavicular fossa, and accordingly as much of the original wound was laid open as to enable examination of the divided trapezius and neighbouring parts to be made. One small lymphatic gland was taken out, some more of the cervical fascia, and a further portion of the trapezius muscle. Again the wound healed well and the patient left the hospital on Feb. 5th, in himself well and free from any indication of local recurrence. One thing, however, had not been liked about him, and that was that he had been suffering a good deal of pain in the left hip. He himself thought that it might be due to the constrained posture of lying on his left side so long in bed, and it was hoped that it might disappear when he began to move about again. Unhappily, it continued to increase and presently he was lame. He was seen from time to time and nothing was to be felt until March 30th, when he returned to the hospital and showed a distinct bony swelling below and in front of the great trochanter. There could be no question what it was and that surgical intervention was impossible. Now also were found two small nodules at the site of the operation, but these also it was resolved not to touch in presence of the secondary extension to other parts. He therefore left the hospital on April 4th and the next heard of him was that on the 13th his leg had given way and broken near the hip. Further recurrences took place at the right shoulder and "affected," so ran a letter about him, "both his head and his side lower down." After great suffering he died at home on May 19th.

CASE 2.—A pale, delicate-looking country girl, aged 19 years, was admitted into St. Mary's Hospital on March 3rd, 1900, with a tumour on the right shoulder. She had had rheumatic fever rather more than a year before and soon afterwards had noticed a small slightly painful lump on the shoulder. At first it had grown slowly, but during the last four months more rapidly. Over the apex of the shoulder, occupying the region of the supra-spinatus muscle, was a distinct tumour, of the size of a large hen's egg, giving a sense of deep-seated fluctuation and feeling much like a distended burra. The skin over it was unaltered. The gravest fears were felt that the case was one of sarcoma, although the history suggested the possibility of an enlargement of one of the bursæ in connexion with her attack of rheumatic fever. On March 6th an exploratory operation was undertaken, at first with a needle and then by free incision through skin and muscle down to the site of the tumour. Blood alone escaped in considerable quantity and no new growth was actually seen, the blood presumably obscuring the tissues. The wound was closed, but because of the continuous oozing of blood it was necessary to insert a drainage-tube, and when two days afterwards the dressings were changed it was obvious that there had been septic invasion. Oozing of blood continued, and when on March 19th she was again put under an anæsthetic for further examination, distinct masses of a grey jelly-like material were seen projecting into the wound. Portions of this were submitted to examination, the verdict of the microscope being "mixed-cell sarcoma." Day by day the gelatinous material protruded in larger volume from the wound and it was obvious that the sarcoma was now increasing by leaps and bounds. Consent for previous operations had been obtained with difficulty and that for amputation was not had before March 25th, when, Mr. Quarry Silcock kindly helping him, Mr. Page removed the whole upper extremity. The operation

[1] Revue de Chirurgie, 1898, 861.

was an exact counterpart of that on the first patient and calls for no special remark save that during it a small deep-seated abscess was opened and probably infected the wound area. Shock was considerable towards the end of the operation but the patient soon rallied after return to bed. For the reason already named healing was not as good as could be wished and stitches had to be taken out earlier than usual. Nevertheless, there was at no time any collection of pus and only the margins of the wound gave trouble. The temperature was normal on the seventh day. She was then up and about the ward, gaining strength daily, and all pain had practically ceased. Suspicion of local recurrence on April 24th led to a further exploration, and a tiny nodule of growth, together with much thickened fascial structures, was taken from the divided edge of the trapezius and the whole upper part of the wound area was freely scraped so as to impart to it a healthier tone. Thereafter healing was more kindly, so that when she left the hospital on May 30th she might be pronounced quite well. Certainly there was at that time no sign of local recurrence, but a letter from her father in mid-December caused grave doubts on this point and the patient was urged to show herself at the hospital. At last, after much persuasion and entreaty, she consented to appear at the end of January of this year, but then only after definite promise that there should be no operation. A fluctuant subcutaneous lump of the size of a Tangerine orange was found over the right side of the spine at the level of the second, third, and fourth dorsal vertebræ, and this, it was urged, should be immediately removed, for careful examination failed to discover any other indication of recurrence either locally or in the internal organs. In herself the patient seemed wonderfully well, but there was a good deal of nervous hyperæsthesia over the whole shoulder region although no bulbous nerve ends could be felt. Accordingly she returned to the hospital and on Feb. 1st the tumour on the back was freely removed. It consisted of soft sarcomatous structure and one large cyst. There had been no invasion of muscular structures. From this operation she is now (Feb. 19th) on the road to early recovery, with some prospect, how faint cannot be known, that she may continue well.

Remarks by Mr. PAGE.—I have thought these cases worthy of publication, not because there is anything specially new in them, but to emphasise my agreement with Dr. Russell S. Fowler of New York, who in an exhaustive paper in the *Annals of Surgery* for January and February, 1900, urges that all cases ought to be recorded. The first case exemplified in a remarkable degree some of the peculiarities of sarcoma—its insidious origin, its early quietude and slow rate of growth, its sudden outburst of extreme malignancy, and the difficulty of its diagnosis. More deceptive indications could hardly have been found than the duration of the swelling and the strange simulation of an abscess. Then, moreover, the surgical interference with the tumour seemed to determine, as has so often been noted, a fresh malignancy of singular violence, so that one would almost think that sarcoma in some of its forms is of all new growths the most malignant. One cannot help feeling that, after all, perhaps the man had better not have been subjected to operation, and it may well be doubted whether his life was prolonged by a single day. Wide dissemination of sarcoma soon followed the major operation, and as general tuberculosis is known to follow operations on local tuberculous diseases, so perchance it may be that the spread of sarcoma is likewise determined. The second case was clearly the less malignant of the two and there is no evidence that operation was in any way answerable for spread of the disease, even though the wound was septic; and here it seems justifiable to assume that removal of the extremity has secured both freedom from suffering and prolongation of life.

Serious shock was not pronounced in either case, attributable to a large extent, of course, to preliminary ligation of vessels and the avoidance of loss of blood. I do not doubt that it is a wise course to pursue in all cases in which the position of the growth, or other reason, does not render it impossible. In both cases it was perfectly easy to secure the subclavian vessels, while the operations as a whole were singularly free from those difficulties which may beset the surgeon in the removal of huge tumours, chondromata, and the like, which have been from time to time recorded and successful operations on which may be rightly regarded as veritable triumphs in surgery.

My thanks are due to my house surgeon, Mr. A. G. Wilson, for invaluable help in the treatment of these cases.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.

A SUCCESSFUL CASE OF GASTROTOMY FOR IMPACTED FOREIGN BODY IN THE ŒSOPHAGUS.

(Under the care of Mr. FLAVELL EDMUNDS.)

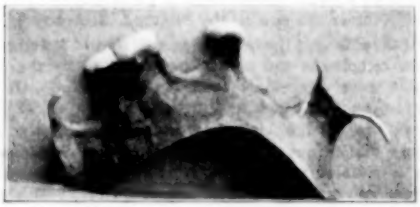
WHEN a foreign body is impacted in the lower portion of the œsophagus and cannot be displaced by the use of bougies three courses are open to the surgeon. He may, firstly, open the œsophagus in the neck and endeavour to remove the foreign body by forceps; this is the oldest method, and is not unlikely to prove successful unless the body is situated very low down. The second method is to perform an intra-mediastical œsophagotomy; this is an operation extremely difficult and dangerous in itself, and it has, so far as we are aware, never been successful. E. Forgue [1] has described a case in which he attempted to perform this operation for an impacted coin, but he was obliged to desist on account of temporary cessation of breathing, and a fortnight later he was able to remove the coin through the mouth by means of a coin-catcher. In the third method, which is especially suitable when the foreign body is impacted near the cardia, a gastrotomy gives the surgeon access to the lower part of the œsophagus, whence the impacted body is removed by means of a finger or forceps. In a case recorded by Mr. D. Wallace [2] of Edinburgh an œsophagotomy was first performed for the removal of an impacted tooth-plate, but the forceps introduced could not dislodge it, so a gastrotomy was tried and the plate was successfully removed by means of a pair of forceps. The diagnosis in such cases as these can be much facilitated by skiagrams. Mr. Flavell Edmunds is to be congratulated on the successful issue of his interesting case.

A man, aged 45 years, on April 10th, 1900, went to sleep as usual without removing his plate of false teeth (consisting of three teeth with three hooks), but awoke about midnight feeling suffocated. His wife fetched him a drink which he swallowed and immediately felt a certain amount of relief in his dyspnœa, the plate evidently passing from the pharynx into the gullet. He was admitted into the Chesterfield and North Derbyshire Hospital early in the morning of the 11th feeling fairly comfortable and having little pain. Dr. A. G. Naylor, the house surgeon, attempted to remove the foreign body by means of a horse-hair probang but was unsuccessful, although on the first occasion the probang was felt to catch the plate. Mr. Edmunds saw the patient later in the day and passed a probang into the stomach without meeting with any obstruction and a further attempt later in the day met with no success. At this time it was thought that the plate had passed into the stomach. On the following day, however, the man suffered acute paroxysms of pain referred to the epigastric region with excessive tenderness over that area, but no vomiting occurred; it pointed to the conclusion that the plate was impacted at the cardiac orifice of the stomach. After a consultation with Mr. W. S. Symes and Dr. A. Green Mr. Edmunds decided to attempt to remove the foreign body through an opening in the stomach. Half an ounce of castor oil was given that night and an enema next morning, and just before the operation the stomach was well washed out with boric solution. On passing the tube for this purpose Dr. Naylor distinctly felt an obstruction before the tube entered the stomach.

An oblique incision two and a half inches long was made about one inch below the costal border to the left of the middle line. The stomach was found without difficulty and was held up into the wound by two silkworm-gut sutures passed through the serous and muscular coats only. Having packed it well round with sponges to prevent any fouling of the peritoneum, Mr. Edmunds made an incision through the wall of the stomach, transversely to its long axis, sufficiently large to admit the finger, but no trace of the plate could be felt in the stomach by finger or probe. The opening in the stomach wall was enlarged to about four inches, sufficient to admit the hand, which was inserted, and on passing the index finger into the œsophagus one of the hooks of the plate could be felt about two inches above the cardiac orifice. The plate was firmly fixed by means of two of the hooks to the œsophageal wall, but manipulation with long-curved forceps passed along the finger released it and it

[1] XIIe. Congrès de Chirurgie, Paris, 1898, p. 220.
[2] THE LANCET, March 24th, 1894, p. 734.

was removed through the stomach. The opening in the stomach was closed by a long continuous suture of fine silk for the mucous membrane alone, and the serous and muscular coats were brought into apposition by means of



The plate, showing the three teeth and three hooks.

between 30 and 40 Lembert's sutures also of fine silk. The parietal incision was closed by means of silkworm-gut sutures through the whole thickness of the wall.

For three days following the operation no food whatever was given by the mouth, thirst, which was a very troublesome symptom, being allayed by means of ice. The patient's strength was maintained by nutrient enemata which were continued for six days. Hypodermic injections of morphia were needed to procure sleep. On the fourth day after the operation half an ounce of peptonised milk was given hourly by the mouth and on the following day (April 17th) one ounce of peptonised milk and half an ounce of bovril were given alternately every two hours. On the 30th (17 days after the operation) the patient was taking middle diet consisting of minced meat with bread-and-butter, &c., and during the following week he was taking ordinary meat diet. The temperature for the first 10 days alternated between 99° and 100° F. and after that fell to and remained normal. The wound was first dressed on the sixth day and healed by first intention save for two small sutural abscesses which caused no trouble.

Remarks by MR. EDMUNDS.—The above case seems to be worthy of record as, according to Mr. Treves's recent edition of "Operative Surgery," in the only two similar cases published the operation was performed by American surgeons (Dr. Bull of New York and Dr. Richardson of Harvard) in 1886 and 1887. The remarkable feature of the present case to me is that subsequently to the operation no pain whatsoever was complained of, either gastric or peritoneal, and the patient was entirely free from vomiting or any dyspeptic symptom whatever, and seven weeks after the operation he was following his occupation and felt in perfect health. The success of the operation was largely due to the constant attention of Dr. Naylor and to his efficient nursing staff.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Condition of the Renal Arterioles in Chronic Bright's Disease.—Toxins of the Pneumococcus.—Congenital Malformation of the Vesical Orifice of One Ureter.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 19th, Professor W. WATSON CHEYNE, the President, being in the chair.

Dr. W. P. HERRINGHAM read a paper on the Condition of the Renal Arterioles in Chronic Bright's Disease. After recapitulating the descriptions given by various authors he suggested that their extreme discrepancy arose from the want of a standard of health and of accurate numerical measurement in disease. He had endeavoured to supply these defects. The changes described were periarteritis, hypertrophy of the muscular coat, and endarteritis. The existence of the first two, at any rate, was by many authors denied. He himself had found it impossible to form any standard of the adventitia in health, and in disease he had found it to vary, not with the condition of the other arterial coats, but with that of the general interstitial tissue of the cortex. He held that it should be considered as a part of this rather than as a coat of the artery, and could not support the use of the term "periarteritis" as a separate condition. For the middle coat he used two measurements, the first transverse, by which in an artery cut transversely the relation of walls to lumen and the thickness of the various coats was determined; the second longitudinal, by which in an artery cut along its long axis the nuclei of the muscular coat could be examined and counted. Some test of the condition of the muscular coat was required, and he considered the number of nuclei present to be less liable to error than other criteria. When a set of standards drawn from six healthy kidneys were compared with a series of 34 cases of various forms of Bright's disease no instance occurred in the latter of true hypertrophy or of hyperplasia of the muscular tissue; but, on the other hand, whenever change occurred it was in the direction of thinning of this coat and diminution of its nuclei. Numerical tables were shown to illustrate this point. This was the case, not only when the disease was advanced, but even when it was in so early a stage as to be unrecognisable by the naked-eye. Fibrosis of the media was not uncommon in these arteries. Changes in the intima were also very common. He found the descriptions of endarteritis given in text-books faulty, since they omitted to notice the increase of elastic tissue which took place in the larger arterioles. He showed photographs of the concentric elastic rings found in these cases and argued that the specimens showed the earliest stage to be a swelling of the elastica with subsequent splitting into layers between which cells derived from the original membrane lay. Hyaline swelling appeared to be the form of endarteritis proper to the smaller arterioles, and he considered this condition to be probably the same process in some way varied by the size of the vessels. It always occurred in these cases along with fibro-elastic endarteritis in the larger arterioles. Besides these two forms he described a third, in which in the larger arterioles a cellular increase, probably formed from the endothelium, though circular in character, was found inside the ordinary fibro-elastic form. The cases in which this occurred showed some evidence, though not conclusive, of syphilis. With regard to the views (1) that Bright's disease was caused by endarteritis and (2) that arterial disease was the result of chronic inflammation of the surrounding renal tissue, he thought that each was probably true of some cases; but that the consequence was not in either case necessary he proved (1) by bringing forward two cases in which marked disease existed in the arteries though the renal tissue was not affected, and (2) by calling to mind the many cases of Bright's disease in young people which showed no arterial change. He thought that for the majority of patients the two diseases were separate and almost independent. The chief factor in the production of arterial disease appeared to be the age of the patient. No connexion could be traced between the degree of arterial and the degree or variety of renal disease. Looking upon arterial sclerosis as an almost universal form of degeneration he held that where Bright's disease was connected with it it was rather as a predisposing cause from its effect upon the general nutrition than as a direct excitant by mechanical obstruction or chemical irritation of the vessels. He disbelieved the theory which referred the high tension pulse to increased obstruction in the peripheral vessels and looked upon it as the effect of disease in the larger arteries by which the function proper to these, that of elastic reservoirs, was perforce transferred to arteries of smaller size.—Dr. J. ROSE BRADFORD agreed with Dr. Herringham as to the fundamental points. It was impossible to correlate the arterial and the parenchymatous changes. With regard to high arterial tension it was not necessarily related to local arterial changes in the kidneys, nor was it settled that the cardiac hypertrophy was attributable to increased resistance. Something might still be said in favour of the old view that the cardiac hypertrophy was of a toxic nature and the renal were secondary to the cardiac changes.—Dr. A. G. AULD agreed with Dr. Herringham that the elastic tissue of the arteries in chronic nephritis underwent a process of splitting. Similar changes had been observed in Bowman's capsule.—Mr. S. G. SHATTOCK asked whether any precautions had been taken to ensure that the arteries examined had been exposed to equal pressure.—Dr. HERRINGHAM, in reply, had found that it was safer to rely on obtaining an average by making a great number of observations upon arteries removed from

the body 24 hours after death than by making injections at given pressures. One objection to the latter proceeding was that the normal average blood-pressure in the renal arteries was an unknown quantity.

Dr. AULD read a paper on Additional Remarks on the Toxins of the Pneumococcus. Experiments he had described on a former occasion were to the effect that infection of the pneumococcus toxins, instead of conferring any active immunity, only served to render the animal more sensitive to the toxins themselves and also to the organism. Additional experiments had shown that the sensitiveness lasted a long time, at least for eight months. Such a phenomenon as supersensitiveness was met with under many conditions, but in the experiments described it seemed constant. The work of Issaeff had thrown light on the subject. He found that rabbits made completely refractory to the pneumococcus itself nevertheless remained highly sensitive to its toxins, much more so than normal rabbits. Hence he concluded that no antitoxin was formed by the pneumococcus. Issaeff's results were in entire harmony with those of Dr. Auld—that was to say, in both cases no antitoxin was present. In Dr. Auld's experiments the toxins were alone injected, and the only anti-bodies which they could call forth were the antitoxins. As they failed to do so the subsequent inoculation of the toxins themselves or of the virus must necessarily be ineffective. Not only so, but such toxins could only be a source of injury and so the increased sensitiveness. They had to look, therefore, in immunity from the pneumococcus to anti-bodies produced by the bacteria themselves, or, according to the side chain theory of Ehrlich, the immunising serum produced by the bacteria contained a body which had two haptophore groups, one which combined with the bacterial cell and the other, or grappling arm, that which attached to the ferment which dissolved the cell. The simple albumoses were useless in immunising against pneumonia. The questions arose, Why was no antitoxin produced? and What was the immediate cause of the sensitiveness? These phenomena were mutually dependent. There must be an excessive accumulation of side chains in the susceptible cells and the failure to cast them off into the blood as antitoxins. Such overloading of the cells would tend to injure them and render them more susceptible. Dr. Auld adduced considerations as to why the antitoxins were not thrown off. Finally, two facts might be explained. One related to the frequency of recurrence of pneumonia; the immunity produced by the "anti-bodies" was short, while the action of the toxins was long. This explained the phenomenon. The other question referred to the failure of serum treatment of pneumonia in man. This was to be accounted for by the fact that the "anti-bodies" in the immunising sera were only capable of exercising their immunising properties on individuals of the same species. Hence the curative serum would be got from immune human beings or possibly from apes.

Mr. RAYMOND JOHNSON exhibited the Genito-Urinary Organs of a Female Infant in which there was a very Unusual Malformation of the Vesical Orifice of the Left Ureter. From the normal position of the latter a raised column attached to the wall of the bladder ran forwards and ended in a bulbous enlargement which protruded through the dilated urethra, forming a closed cyst which emptied spontaneously on the sixth day after birth. In addition to this malformation the left kidney was imperfectly divided into two portions, each having a separate ureter, the two ureters uniting at a point just above the bladder. The right kidney and its ureter were normally formed, but the latter was dilated. The genital organs and the large intestine were normal. The infant from which the specimen was obtained had died on the thirteenth day, evidently as the result of urinary infection. Before its rupture the distended ureteral orifice had projected through the urethra and between the labia as a small egg-shaped tumour. A similar malformation had been previously described and must be referred to an early error in development. It was probably dependent upon a failure in the natural separation which occurs between the lower extremities of the ureter and the Wolffian duct. The ureter was thus drawn downwards during the formation of the septum, dividing the urogenital sinus so that it came to open in the floor of the urethra.—Mr. DOUGLAS DREW referred to a case in which a child lived three weeks with a similar condition of the ureters.—Dr. A. F. VOELCKER referred to an example of the condition in the museum of the Middlesex Hospital.—Mr. SHATTOCK agreed with Mr. Johnson as to the origin of the defect. He (Mr. Shattock) had termed the condition a reversion to a reptilian type of structure.

Mr. DREW showed a specimen comprising the Kidneys, Ureters, and Bladder removed from the body of a woman, aged 39 years. Above the middle of the left ureter a rather large calculus was impacted and the part of the ureter above it was stenosed. The left kidney was hydronephrotic and contained a large pear-shaped stone. The patient died suddenly from uræmia and was admitted with hæmaturia of ten days' duration.

Mr. A. CORRIE KEEP showed a Hydronephrotic Right Kidney which contained 25 ounces of thick pus and some blood-clot and a small uric acid stone. The patient had had no rise of temperature and very little pain.

LIVERPOOL MEDICAL INSTITUTION.

Report on the Outbreak of Arsenical Poisoning in Liverpool amongst Beer-drinkers.—Appendicitis.

THE tenth ordinary meeting of the session was held on Feb. 14th, Mr. EDGAR BROWNE, the President, being in the chair.

At an ordinary meeting of the institution held on Dec. 20th, 1900, a discussion took place on an Outbreak of Arsenical Poisoning amongst Beer-drinkers, and at the close of the meeting a sub-committee was formed to consider the matter and to report to the institution. This report was now made to the meeting. It re-established the fact that during the last six months a considerable increase of cases usually described as alcoholic neuritis had been observed by medical men in Liverpool. These had in the majority of cases been limited to the poorer classes, hence the best opportunity for observation had been in the union hospitals and general infirmaries. On careful inquiry into the histories of those attacked it had been found without exception that they had been in the habit of drinking beer, generally of a cheap quality, either in small quantities or to excess. The explanation of this sudden increase in the number of cases of neuritis and the presence of some unaccustomed symptoms was afforded on Nov. 22nd, 1900, by the discovery of Dr. E. S. Reynolds of Manchester that arsenic was present in the beer consumed by the patients. In Liverpool the matter was investigated by the medical officer of health, who caused samples of the suspected beer to be taken and subjected to analysis. The result of these analyses showed in a number of cases serious contamination with arsenic. Further investigation showed that the source of the arsenic was impure sulphuric acid which had been used in the manufacture of glucose and other sugars. These sugars were employed as brewer's substitutes in the manufacture of beer. The arsenical sulphuric acid was made from arsenical pyrites, whereas nothing but pure sulphur should be used in the preparation of acid which was destined to be employed in the preparation of food products. The analyses showed that in some samples as much as one and a half grains of arsenic were found to a gallon of beer—a very serious and dangerous contamination. The number of persons attacked had been considerable, certainly several hundreds, and of this number many died. A table of 116 cases occurring in Liverpool and Birkenhead which admitted of easy verification had been drawn up and were appended to the report. Of the 116 cases nine persons died and five were inquest cases. The committee were aware of a large number of cases occurring in other institutions and in private practice. The withdrawal and destruction of the contaminated beers in Liverpool was followed almost at once by a great diminution of cases of neuritis and it was satisfactory to record that the epidemic had been overcome. The possibility of an article of such general consumption as beer being contaminated by a deadly poison such as arsenic had caused widespread alarm to the community and to the medical profession, and the committee felt that it was necessary that some prompt steps should be taken by the legislature to obviate any such serious dangers to the health of the public in future as, considering the prevalence of chemical methods of manufacture deleterious substances, might at any time be introduced. Upon the facts as set before them the committee unanimously made the following recommendations:—

(1) That means be taken to secure purity of beer; (2) that a strict supervision of the materials selected for use in the manufacture of beer was necessary; and (3) that all beers should be labeled by the brewers showing their exact composition.

Mr. F. T. PAUL and Mr. R. W. MURRAY introduced a discussion on Appendicitis. Mr. Paul's paper was chiefly concerned with treatment especially as regards the value of early operation. He endeavoured to show from past clinical and post-mortem records that the mortality in acute attacks never had been high, probably not more than 6 or 7 per cent., the deaths then, as now, being mostly due to septic peritonitis. Early operation as a general rule of treatment could only be accepted if it lessened the direct mortality due to acute attacks. The prospect of a recurrence was no argument in favour of it, as this could be treated with much less risk after convalescence. Nor should the fear of septic peritonitis encourage hasty operations. This dangerous complication was usually established from the first, whilst many surgeons operated because there was a lump and they were afraid it would burst into the peritoneum. A lump was not a source of danger, but an evidence that a danger had been averted, and even although an abscess might form the peritoneal cavity was the last place into which it was likely to discharge. So far as he could judge the mortality from early operation was much greater than the mortality from the disease as it occurred in England. Mr. Paul recommended operation at once in septic peritonitis or in abscess as soon as a definite collection of pus was recognised and in attacks which did not clear up—relapsing appendicitis. Otherwise the operation should always be postponed till after convalescence, when it might be undertaken in children after a first attack, as the mortality was almost *nil*, but in adults it should not be undertaken unless a second attack supervened. He recommended that an ordinary acute attack of appendicitis should be treated by rest, local warmth, starvation, and opium with discretion, and considered purgatives and milk diet as responsible for many disasters. Finally, he referred to various details which he believed contributed to the success of the operation. His mortality in operations undertaken during a quiet interval was at present under 2 per cent. Mr. Murray in his paper, after reviewing the evolution of the gastro-intestinal tract, said that the teaching of comparative anatomy pointed to the vermiform appendix being the remnant of a greater cæcum. Though many of the lower animals possessed a long and pointed cæcum they seldom suffered from an affection at all akin to appendicitis, the probable explanation being that in them it served a definite physiological purpose. The greater frequency of appendicitis amongst civilised nations was no doubt due to their more complex diet. The anatomy and histology of the appendix was mentioned and the probable sequence of pathological events which led up to, and terminated in, an attack of appendicitis was explained. The clinical symptoms which corresponded to these pathological changes were commented upon, especially those symptoms which pointed to commencing bacterial invasion of the general peritoneum, for in such cases early operative interference was urgently called for

Sir WILLIAM M. BANKS considered that many of the cases that were called mild appendicitis nowadays were really cases of typhlitis and perityphlitis; these were of the mildest nature and recovery without operation was almost invariable. Appendicitis proper he considered in three stages: (1) pre-suppurative; (2) suppurative; and (3) quiescent. 1. The pre-suppurative stage was one from which recovery might be expected in many cases without operation, the treatment being starvation with fomentation of the flank. He deprecated the use of opium as a routine treatment, as it was apt to mask the symptoms of the disease and produce symptoms of its own. The signs of danger were a slight rise of temperature, a rapid pulse, an increase in the amount of swelling, and drenching sweats. 2. As soon as the suppurative stage had been diagnosed the pus should be evacuated, when the appendix was practically destroyed, and such patients had no return of appendical trouble. 3 In the quiescent stage a valuable advance had been made by the removal of the appendix in cases of recurring appendicitis. He would let the patient have three attacks before removing the appendix, because the second attack was often a very mild one and only a recrudesence of the original one which had not quite cleared away.

Mr. W. THELWALL THOMAS considered operative interference necessary if in 48 hours the symptoms and signs did not decrease. Well-defined induration in the iliac fossa persisting after that time indicated the presence of pus and being separated from the general peritoneal cavity by recent soft adhesions tended to burst in that direction. He deprecated the routine use of opium in acute abdominal affections and found that the application of collodion and belladonna to the iliac fossa under hot fomentations soothed pain best; but if after 24 hours these applications increased the pain suppuration was probably present. In relapsing cases operation was always necessary and was certainly indicated in recurrent cases if after two or three attacks the patient was incapacitated from exercise or if the attacks became more severe. In such cases pathological changes were always found in the excised appendage.

Dr. MACFIE CAMPBELL, considering the subject from the general practitioners' side, said that he always gave opium or morphia, as the immediate relief of pain was necessary and helped towards a more accurate diagnosis. His experience of its use was most favourable. Poulticing was valuable in relieving pain and as a diagnostic agent between congestion and suppuration. Operation was advisable in recurring cases.

Dr. GEORGE G. HAMILTON did not consider the temperature an important sign, for the abdomen might be full of pus and the intestines all matted together after a perforated appendix or typhoid ulcer and yet there might be little rise of temperature. He had seen appendices five and six inches long causing obstruction to the ascending colon and rectum respectively.

Dr. ARTHUR EVANS referred to a very acute case of appendicitis in a child who was operated upon within half an hour of the appearance of first symptoms and the appendix was found to be bulbous and to contain pus. He also related a case of gunshot wound of the abdomen (which he had seen in South Africa) where the signs and symptoms produced were those of perforative appendicitis, and it was found that the appendix had been wounded by the bullet.

Dr. F. S. PITT-TAYLOR thought starvation a bad preparation for a serious operation. He emphasised the fact that in raw eggs well beaten up in water they had a perfect food, always liquid and capable of almost complete absorption.

Dr. WILLIAM CARTER and Mr. RUSHTON PARKER also spoke and Mr. PAUL and Mr. MURRAY replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Plague.—Proteids in the Urine.—Exhibition of Drawings and Specimens.

A PATHOLOGICAL meeting of the above society was held on Feb. 15th, Dr. GORDON BLACK, the President, being in the chair. Before proceeding to the business of the evening the PRESIDENT referred in a few well-chosen words to the death of Her late Majesty Queen Victoria.

Dr. E. F. TREVELYAN read a paper based upon a bacteriological investigation of the recent cases of Pneumonic Plague in Hull. The morphological and cultural peculiarities of the bacillus pestis were first described and illustrated by specimens, preparations, and drawings. In discussing the bacteriological diagnosis Dr. Trevelyan thought that if the lung contained large numbers of a micro-organism with the morphological and staining peculiarities of the plague bacillus a positive diagnosis should certainly be given without awaiting confirmation by cultivation and experiment. This had been done in the first two of the Hull cases. As regards the sputum, a careful and often-repeated examination had been made in four of the cases, the results being controlled by inoculation experiments. None of the sputum received from these cases presented in cover-glass preparation a pure culture of the plague bacillus. In fact, there were so many micro-organisms present that the examination was often rendered very difficult. Cultivation of the sputum in broth at 22° C. in two instances had proved of no real service. The sputum received was nearly always viscid and more or less rusty in appearance. Blood had been examined from three cases and the plague bacillus was readily found by cover-glass preparation in two cases and by cultivation in all the cases. The examination of the blood, although of distinct service in one case, is usually rendered of less value from the diagnostic point of view from the fact that the bacilli are not likely to be found until late in the disease. In the confirmatory inoculation experiments more

satisfactory results had been obtained with guinea-pigs than with white rats. In conclusion, Dr. Trevelyan thought that the danger of investigating plague material could be overstated, although, of course, careful precautions must be taken, especially in keeping the inoculated animals, in not directly handling them or their tissues, in immediately sterilising all instruments, &c., used, and in cremating the carcasses.—Dr. POWELL WHITE and Mr. CAMMIDGE took part in the discussion, and Dr. TREVELYAN replied.

Mr. P. J. CAMMIDGE read a paper on the Significance of some forms of Proteid found in the Urine in Bright's Disease. After briefly referring to the methods of separating and estimating serum, albumin, and globulin in the urine Mr. Cammidge showed, by means of the lantern, a number of charts illustrating the daily variations in total and percentage proteid excretion, also the relation between the albumin and globulin passed in various forms of nephritis, including the albuminuria of pregnancy and eclampsia. Reference was made to the influence of paracentesis, to the induction of premature labour, and to the rise of temperature on the excretion of these substances. Most of the cases had been under observation for several weeks, some for two or three months, and in all a daily examination of the urine, including proteid estimations, had been made. After considering the cases in detail Mr. Cammidge stated that he believed the percentage, or better the total amount, of serum globulin present in the urine in a case of nephritis was the surest indication of the severity of the disease of the kidney. In estimating the globulin, however, it was important to eliminate the influence of mucus (nucleo-proteid) on the result as far as possible by the use of the catheter in women, especially those who were pregnant, and the lack of this precaution might account for the generally accepted statement that the globulin exceeded the albumin in amount in eclampsia—a statement with which he did not agree.—A discussion followed in which the PRESIDENT, Dr. LONG, Dr. A. G. BARRS, Dr. T. W. GRIFFITH, and Dr. J. B. HELLIER took part, and Mr. CAMMIDGE replied.

Dr. J. KERR (Bradford) showed a number of drawings from cases of Vascular Obstruction in the Retina. In four cases of embolism of the central artery small macular twigs had escaped and a minute, nearly central, portion of the field persisted. In one of these cases streaming movement of the blood in the veins was seen for nearly a week from the onset, and in another broken-up pulsating venous columns were noticed for several days.

The following specimens were shown:—

Mr. CAMMIDGE: (1) A Colloid Carcinoma of the Omentum; (2) a Carcinoma of the Hepatic Flexure of the Colon; and (3) (with Dr. A. L. WHITEHEAD) Tuberculous Iritis, showing Tubercle Bacilli.

Dr. PRIESTLEY LEECH (Halifax): (1) A large Chronic Ulcer of the Stomach; and (2) a New Growth and Cirrhosis (?) of the Liver.

Mr. SECKER WALKER: A specimen of Intra-ocular Hæmorrhage after Cataract Extraction.

Dr. HELLIER: Specimens from cases of Carcinoma Uteri treated by Hysterectomy.

Mr. W. H. BROWN: Myoma Uteri removed by Abdominal Hysterectomy.

Mr. WALTER THOMPSON: Fibro-myoma of the Uterus (undergoing sarcomatous degeneration?).

Dr. GRIFFITH: (1) Embolism of the Cerebral Arteries; and (2) the Heart and Pancreas from a case of Diabetes Mellitus.

Dr. BRONNER (Bradford): Microscopic specimen of a small Sarcoma of the Upper Turbinated Bone, which caused Epistaxis for one and a half years (death).

Mr. H. J. ROPER and Mr. LAWFORD KNAGGS: Bladder and Kidneys from a case of Enlarged Prostate, showing enormous dilatation of one ureter and kidney.

Mr. LAWFORD KNAGGS: Malignant Disease of the Rectum (perforation of the cæcum).

Mr. B. G. A. MOYNIHAN: (1) (with Dr. W. H. M. TELLING) A Rectum with Fæcal Concretions in Appendices Epiploicæ, giving rise to inflammatory adhesions and obstruction of the small gut; (2) Keloid of the Breast; and (3) Cystic Disease of the Kidneys and the Liver.

Dr. E. WARD: (1) Epithelioma of the Soft Palate; and (2) Growth of the Jaw.

Mr. MAYO ROBSON: (1) Malignant Disease of the Cæcum (excised); and (2) Carcinoma of the Stomach (excised).

Dr. TREVELYAN and Mr. CAMMIDGE showed 40 specimens recently added to the School Museum, including amongst others: an Infarct of the Spleen with Aneurysm of the Splenic Artery; a large Compound Ganglion of the Wrist; Two Bronchial Cysts, one from the parotid region the other from the neck; a Lipoma of the Small Intestine causing intussusception; a Sarcoma of the Testis with Hydrocele; a Cystic Papillomatous Growth of the Left Ovary, the right having been removed six weeks before for a similar disease; a large Hydatid Cyst of the Kidney from a boy, aged six years; a Sarcoma of the Liver and Left Axillary Glands (the liver weighed 17 lb; no other growth was found); a large Fibroma of the Cervix Uteri from a woman, aged 23 years (the uterus appeared as a small knot on the summit of the growth); and a Cystic Omentum which microscopically proved to be a Lymphangioma.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 8th, Dr. F. F. Schacht, the President, being in the chair.—It was unanimously resolved—

That an address of sympathy and condolence, conveying the society's expression of loyalty and respect, be sent to His Most Excellent Majesty the King.

—Dr. Campbell Pope then read a paper on the Feeding of Infants in Health and Disease. He said that the problem as presented by nature was one of extreme simplicity, but advancing civilisation had added great complexity to it. In cases where artificial feeding was imperative he recommended the system of physiological feeding as advocated by Holt and Rotch in America and supported by Cautley, Pritchard, and others in this country. For the well-to-do the necessary modification of the milk to the varying standard of human milk at different periods was ably carried out by the Walker Gordon milk laboratories. For others in less favoured circumstances Pritchard's tables for home use supplied the necessary information. He then described milk prescriptions for the modification of milk in accordance with the various failures in digestion of fats, proteids, or carbohydrates, as evidenced by a critical examination of the stools. The prevention of rickets and scurvy was alluded to and special reference was made to virol as being useful from containing citrate of lime. After discussing the subjects of overfeeding and weaning Dr. Pope described the various pollutions which accrued to milk under present conditions in its transit from the cow's udder to the mouth of the infant and strongly advocated more method and simplicity. Most sanitary evils could be avoided by bottling at well-inspected farms and the universal adoption of the physiological method of feeding would introduce simplicity instead of complexity and confusion. He hoped the time would come when municipalities would see that nurse children under their supervision in homes, crèches, or institutions were afforded the benefit of properly modified pure milk.—Dr. Harry Campbell insisted upon the advisability of feeding children after weaning on hard, coarse foods needing prolonged mastication. He regarded the present plan of feeding children upon soft, pappy foods as most pernicious and as being the chief cause, from want of proper use of the masticatory apparatus, of dental caries and adenoids.—Mr. T. R. Atkinson said that he did not think that the want of hard food for children after weaning was the cause of caries of the teeth and adenoids.—Dr. Leonard Dobson said that feeding-bottles must be used in many cases, and he advocated the "Allenbury" as being the simplest and most easy to keep clean. He considered Dr Pope's tables and methods of preparing milk food admirable, but applicable to but a limited class. He was certain that the average nurse or mother of the middle classes could not be trusted to carry out daily accurate measurements of the quantities required and efficient sterilisation of the apparatus. Something simpler was required and he had found the Aylesbury Dairy Co.'s humanised milk to be a most satisfactory preparation. It was sterile, contained the right proportion of fats, proteids, and carbohydrates, and if considered too rich the cream, which always rose to the top of the bottle, could easily be reduced in quantity. If this was considered too expensive then he suggested the use of their sterilised milk, which was but little dearer than ordinary milk. If for various reasons it was necessary to use tinned milk, then he suggested that Nestlé's sterilised, unsweetened, condensed milk was the best. In all cases of diarrhœa and vomiting he stopped the use of milk altogether for two or three days and used a simple mixture of white of egg in boiled water, with the addition of a few drops of

meat-juice. He urged that infants when ill should be given plenty of plain boiled water to drink and not such large quantities of their usual food.—Dr. J. B. Ball said that he could not agree with Dr. Campbell that the want of hard food with infants was the cause of adenoids. He had repeatedly seen infants of from one to four months old with adenoids.—Dr. Langdon-Down said that he had carried out in his own family the recommendations described in Holt's work. He used Hawksley's apparatus for pasteurising the food.—Mr. W. Milner Burgess said that he used Aymard's steriliser with great success in the feeding of infants.—Dr. Twynam pointed out the value of citrates as preventing rickets, and he suggested that fresh orange juice or lemon juice should be given to the infant or to the nursing mother.

BOURNEMOUTH MEDICAL SOCIETY.—The members of this society have recently acquired rooms in the Shaftesbury-hall Chambers, 74, Old Christchurch-road, for their library and to hold their meetings in. The committee have incurred considerable expense in the ventilating and heating arrangements of the rooms, in installing the electric light, and in providing the necessary fittings and furniture. Nearly all the medical men practising in Bournemouth and its neighbourhood are members of this society. The library contains a large number of medical and surgical works of reference besides weekly and monthly periodicals. The members held their first monthly meeting in their new rooms on Feb. 13th, when there was a large attendance, Dr. Arthur Ransome, the President, being in the chair. The President said, before having the minutes read, that there were two things which he wished to allude to. The first and most important was the death of the Queen. It was not necessary for him to say anything about the illustrious example set by the late lamented Sovereign, he would simply quote the words of Vaughan:

> "She has now gone into the world of light
> And we alone sit lingering here;
> Her very memory is warm and bright,
> And our dull thoughts doth cheer."

The second thing which he wished to allude to was that that was the first meeting of the society in the new rooms. He thought that the society was to be congratulated on having acquired a fixed abode so that it was no longer a peripatetic body. He congratulated the members on the way in which they had responded to the appeal made to them for funds to meet the special expense involved in providing furniture and fittings, &c.—The minutes of the special and ordinary meetings held on Jan. 9th were read and signed.—Dr. Percy J. Duncan showed a child, aged 11 months, with an Inflammatory Swelling on the Left Buttock and a Nævus on the Right Buttock which was stated to be increasing and asked the opinion of the members in reference to the nævus, especially as to treatment.—The President brought before the society a communication as to the British Congress on Tuberculosis to be held in London in July, 1901. It was resolved "that the matter be referred to the committee to consider."—Dr. G. E. Crallan read a paper on Delirium in General Diseases. He said that delirium might be defined as a perversion or loss of control of the mental processes which might be manifested in speech or action. The characteristic of healthy mental processes was that they were in harmony with the actual sensory impressions of the present and with the memory of those of the past. In delirium this concord was lost and mental processes ceased to correspond to realities; firstly, there were false ideas—that was, "delusions"; secondly, sensory images arose without sensory impressions from without—that was, "hallucinations"; and thirdly, actual sensory impressions from without excited erroneous sensory images—that was, "illusions." The term "delirium" was usually confined to temporary mental derangements occurring in connexion with disease which was otherwise recognisable. A similar mental state occurring apart from such recognisable diseases was regarded as insanity. Delirium might be quiet or active. In quiet delirium there were delusions and hallucinations which dominated the patient's ideas. He often talked almost continuously in a low monotonous voice with the words imperfectly articulated—a condition termed "low muttering delirium." In active delirium the patient tried to act according to his erroneous and distorted ideas, such as getting out of bed, running about, smashing things, or trying to jump out of a window. He mentioned the diseases in which delirium occurred as a symptom, its etiology in these conditions, and its diagnosis and treatment, in the course of which he narrated some interesting cases.—The President congratulated Dr. Crallan on his excellent summary on this interesting subject and mentioned some cases which had occurred in his own practice.—Dr. Alderson, Dr. Vernon, Dr. Simmons, Mr. T. F. Gardner, and Dr. Hyla Greves took part in the discussion and Dr. Crallan replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Feb. 13th, Dr. A. T. Wilkinson, the President, being in the chair.—Dr. E. F. Trevelyan (Leeds) read a communication on Some Tumours of the Dura Mater. He first referred to the minute structure of the dura mater. Of three specimens of psammoma shown two originated from the falx cerebri and the remaining one from the dura mater over the Rolandic area. A fourth psammoma, of which sections only were shown, started from the meninges of the base. All these tumours were of small size with the exception of one of those which sprang from the falx. The other tumour growing from the falx was hard and contained much calcareous material, whereas the growth over the Rolandic area was quite soft. Both these tumours only contained well-formed fibrous tissue in addition to the psammoma bodies. The remaining two tumours belonged to the endothelicmata. Dr. Trevelyan thought it more useful to classify these growths according to the preponderating tissue present—e.g., psammo-fibroma, &c. The so-called psammoma bodies were not peculiar to tumour formation, for as far as the dura mater alone was concerned they had been found in pachymeningitis (Ribbert) and even in the normal dura mater (Ford Robertson). The microscopical sections seemed to favour the view that the concentric bodies originated from aggregated endothelial cells, but numerous rod-like and needle-shaped structures were also present. The large tumour was directly responsible for death, whereas the basal tumour was an accidental find at the necropsy. The patient with the psammo-fibroma over the Rolandic area fell downstairs probably in an attack of vertigo and sustained a fatal fracture of the base. The only symptoms present here during life were two or three attacks of fainting or vertigo during the last few weeks of life. Dr. Trevelyan referred to another case of a small fibro-sarcoma of the dura mater indenting the temporo-sphenoidal lobe in which death was sudden and no other lesion was found in the body. Of two specimens of osteoma of the dura mater the one showed several small growths on the outside of the dura mater, and the other, a simple growth, proved to consist of pure bone and presenting the shape of a limpet-shell. A specimen of Multiple Tuberculous Growths from the dura mater in the posterior fossa was also shown, as well as a Gummatous Growth of the Meninges over the arm-centre in which the pia-arachnoid appeared to pass beneath the growth.—Mr. Montgomery described a case of Growth of the Aryteno-epiglottic Fold.—Dr. J. H. Ray showed and described three specimens of Acute Intussusception. 1. Acute ileo-cæcal intussusception of at least five days' duration, presenting two rents in the intussusciplens near the apex of the "tumour," which was four inches long, irreducible, and was excised during life from a male child, aged seven weeks, in whom end-to-end anastomosis was then carried out. Microscopic sections revealed submucous hæmorrhages, increase in number of goblet cells, and marked œdema of the circular muscular tissue. 2. A reduced ileo-cæcal intussusception of 24 hours' duration from a male child, aged seven months. The patient lived five days after operation and the bowels were moved four times. He eventually died from paralytic obstruction of the small bowel. In the caput cæci a submucous hæmorrhage was to be noted. 3. A reduced colo-colic intussusception from a male child, aged four years, in whom symptoms had existed for at least 14 hours. The apex of intussusception was on the anterior surface of the transverse colon and still showed as an oval patch, one inch by half an inch of marked congestion and extravasation. The microscopic appearances were similar to those in the first of the three cases.—Dr. E. S. Yonge made a short communication on Simple Growths of the Tonsil.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 14th, Dr. E. Wearne Clarke, the President, being in the chair.—Mr. C. Atkin showed a patient upon whom he had operated for symptoms of Acute Intestinal Obstruction caused by pressure of a large

hydronephrosis. The right kidney, absent from its normal position, presented in the epigastric region, pressing forward the transverse colon and stomach. On scratching through the omentum a cyst of the size of a cocoa-nut was discovered and it was tapped. The patient, a youth, aged 19 years, though *in extremis*, recovered perfectly and six weeks later had had no signs of recurrence.—Dr. D. Burgess showed the following specimens: (1) the Organs from a case of Lardaceous Disease without apparent cause; and (2) Extensive Cerebral Softening due to Thrombosis of the Middle Cerebral Artery from a case of Senile Diabetes.—Mr. H. A. Mason (for Mr. A. J. Hall) showed two cases of Aortic Stenosis in young women and Extreme Clubbing of the Fingers in a case of Phthisis.—Mr. A. K. Gale and Mr. H. Hallam reads notes of eight cases of Peripheral Neuritis accompanied by Pigmentation of the Skin occurring among Beer-drinkers. The cases comprised six women and two men. In the majority the illness commenced with digestive disturbance, numbness, and sensations of "pins-and-needles" in the hands and feet, soon followed by loss of power in the arms and legs. They all presented the following physical signs: (1) varying degrees of peripheral neuritis up to complete loss of power; (2) brown pigmentation of the skin all over the body, most marked on the abdomen and chest, followed by desquamation; and (3) thick desquamation of the skin and redness of the palms of the hands and the soles of the feet. In all but one case, a known alcoholic, the mental condition was perfectly good. The beer—a light ale—taken by four of the patients was pronounced by the Derby county analyst to contain arsenic in dangerous quantity.—The President, Dr. Burgess, Dr. S. White, Dr. R. Gordon, Mr. E. Skinner, Mr. R. J. Pye-Smith, Mr. Atkin, Dr. F. H. Waddy, and Dr. J. Sorley joined in the discussion.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on Feb. 7th, Dr. D. B. Lees, the President, being in the chair.—Dr. Inglis Parsons read a paper on Persistent Metrorrhagia, which is published in the present issue (p. 547).—The President suggested that some of these uterine hæmorrhages might be due to very small abrasions, as was sometimes the case in hæmorrhage from the stomach, and that others might be due to constitutional causes, such as increased arterial tension.—Dr. Davson remarked that he had listened with much attention to the paper read by Dr. Parsons. It had given him further insight into the treatment of menorrhagia which on several occasions had baffled all the ordinary treatments. It was presumable that those patients who did not yield to treatment within a given time did so only from persistency in treatment and the constant recumbent position. He had had cases where curetting had failed, and no doubt had he known of the electric treatment suggested and used by Dr. Parsons the patients would have made a speedy and successful recovery. He would certainly on the next opportunity give it a trial.—Dr. Inglis Parsons, in reply, said that any battery would do provided that it had sufficient output to give the necessary strength of current. By the use of the galvanometer they could give a fairly exact dose. With regard to the use of steam they had to wait to see if the result would be permanent. He would much prefer its use to electricity if the hæmorrhage could be stopped with one application. Some of his cases of fibro-myoma had now kept free from hæmorrhage for 10 years and he therefore felt that he could rely on electricity. Sclerosis of the uterine arteries would not explain the persistent menorrhagia in his cases because the patients were mostly women under 40 years of age. It was quite exceptional for sclerosis to occur before middle life.

NORTH-EAST LONDON CLINICAL SOCIETY.—A meeting of this society was held at Tottenham Hospital on Feb. 7th, Dr. E. Hooper May, the President, being in the chair.—Dr. Tresilian showed a case of Myopathic Paralysis and a case of Congenital Facial Diplegia.—Dr. S. E. Dore showed a boy, aged 15 years, with innumerable Subcutaneous Nodules, presenting microscopically a Fibrous Structure. The skin was markedly elastic and there was a tendency to subcutaneous hæmorrhages. The boy had also congenital heart disease. All his joints showed over-free mobility and he had an old-standing injury to the left elbow.—Mr. Douston showed a case of long-standing Fixation of the Mandible the result of rheumatoid arthritis.—Dr. R. Murray Leslie showed: (1) A case of Congenital Heart Disease; and (2) a Specimen of Malignant Disease of the Omentum and Gall-bladder removed post mortem from a woman who had been in the hospital suffering from Chylous Ascites.—Dr. Arthur Giles showed: (1) A Dermoid Cyst of the Ovary removed by Abdominal Section; and (2) a Uterus with several Fibroid Tumours removed by Abdominal Hysterectomy.—Dr. Chappell showed: (1) A Tumour of the Pons removed post mortem from a child (who had previously been shown to the society) who had presented unusual focal phenomena; and (2) an Œsophageal Growth with microscopical section showing it to be of a sarcomatous nature.—Mr. Carson showed a Scirrhus of the Pylorus removed by Pylorectomy and Gastro-duodenostomy by Kocher's method.—Dr. Meachen showed a microscopical specimen of Ringworm showing the large-spored fungus.—Dr. Meachen also read notes and showed a water-colour drawing of an Anomalous Form of Quinine Eruption.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Feb. 13th, Dr. M. G. Biggs, the President, being in the chair.—Miss C. M. Parker, of the Ealing Training College for the Deaf, gave a demonstration on Lip-reading, illustrating it by means of a deaf mute. Miss Parker, after explaining the method of teaching lip-reading and showing the readiness with which it was acquired, spoke as to its value not only to those who were entirely deaf but also to the partially deaf, enabling such to follow conversation, the play, and the like, the greater part of which was usually lost to them, thus giving them an interest in their surroundings. It also avoided the necessity of loud speaking, especially to the detriment of the voices of children. The pupil had made remarkable progress and had none of the dull and apathetic appearance so common in the deaf.—Mr. Cecil Lyster showed some cases of Rodent Ulcer and of Lupus treated by the X Rays which had been very markedly improved by repeated exposures. A large tube was used for not more than ten minutes at a time at a distance of not less than six inches About seven exposures appeared to be sufficient to produce a good scar, the surrounding healthy tissue being protected by lead foil. Occasionally with too long or too close exposures a temporary dermatitis was produced. He considered that the best results were obtained by using a Wimshurst influence machine for producing the rays.

HUNTERIAN SOCIETY.—At the annual meeting, held on Feb. 13th, the following officers were elected for the ensuing year:—President: Dr. J. Dundas Grant. Vice-Presidents: Sir Hugh Beevor, Bart., Dr. Patrick Manson, Mr. H. J. Sequeira, and Mr. F. R. Humphreys. Treasurer: Dr. R. Hingston Fox. Trustees: Dr. H. I. Fotherby and Mr. F. M. Corner. Honorary librarian: Dr. T. H. Arnold Chaplin. Orator: Dr. A. T. Davies. Secretaries: Mr. J. H. Targett, and Dr. T. Glover Lyon. Editorial secretary: Dr. W. Rawes. Council: Dr. W. A. Dingle, Dr. W. J. Ettles, Dr. Fortescue Fox, Mr. A. W. Galloway, Dr. D. W. Goodall, Dr. Harold J. Johnson, Dr. W. H. Kelson, Mr. W. C. M'Donnell, Dr. J. W. Oliver, Dr. F. J. Smith, Dr. J. H. Sequeira, and Dr. T. G. Stevens. Auditors: Mr. F. Gordon Brown, Mr. Hope Grant, Dr. S. H. Appleford, and Dr. W. Rawes. After the annual meeting Mr. John Poland delivered the society's Oration, his subject being "A Retrospect of Surgery during the Last Century."

WIGAN MEDICAL SOCIETY.—The annual meeting of this society was held on Feb. 14th. Dr. Blair was voted to the chair.—A vote of condolence to the King and the Royal family was passed.—A vote of condolence to the relatives of the late Mr. G. Morris of Skelmersdale was also passed.—The following were elected office-bearers for the ensuing year:—President: Mr. William Latham. Committee: Mr. Latham, Mr. Mitchell Roocroft, Mr. Brady, Mr. Blair, Mr. Benson, Mr. Graham, Mr. T. M. Angior, and Dr. R. P. White. Honorary treasurer: Mr. E. H. Monks, J.P. Honorary secretary: Mr. William Berry.—The annual dinner was afterwards held and there was a very good attendance of members and visitors, including Sir William Mitchell Banks, Dr. J. Barr (Liverpool), Mr. D. A. O'Sullivan (Southport), Dr. T. E. Hayward (Haydock), and Dr. J. Reid (St. Helens).

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held in the Medical Library of University College on Feb. 13th, Dr. D. S. Davies, the President, being in the chair.—Dr. W. H. C. Newnham showed two specimens of Fibroid Tumour removed by intra-peritoneal hysterectomy.—Dr. Aust Lawrence, Mr. Munro

Smith, Mr. R. Williams, Dr. W. C. Swayne, Mr. Paul Bush, and Dr. W. K. Wills spoke on the subject.—Dr. F. H. Edgeworth read a paper on a case of Purpura Hæmorrhagica.—Dr. T. Fisher, Mr. J. Ewens, and Dr. Swayne commented on the paper.—Dr. H. Waldo read notes on a fatal case of Hæmatoporphyrinuria.—Professor Stanley Kent remarked on the case.—The President made a communication relating to Plague and introduced to the society Professor Stanley Kent who spoke on the subject and showed Microscopic Specimens and Cultures.

MIRFIELD AND DISTRICT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Memorial Hospital, Mirfield, on Feb. 13th, Mr. J. A. Erskine Stuart being in the chair.—Dr. A. G. Barrs (Leeds) read a paper on the Minor Degrees of Circulatory Failure and their Treatment, in which he discussed the possibility of many disturbances at present attributed to high arterial tension being really due to the opposite condition. He also called attention to the circulatory origin of many symptoms which were usually ascribed to defects in the nervous and digestive systems.—Dr. Stuart, Dr. Sprouile, Dr. Tait, Dr. Stewart, and Dr. Milne discussed the paper, and Dr. Barrs replied.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—At a meeting of this society, held at Paddington Green Children's Hospital on Feb. 15th, Mr. Watson Cheyne being in the chair, 32 new members were elected, while the names of 20 candidates for membership were submitted to the meeting as having been approved by the council. A loyal address to the King, expressing the respectful sympathy of the members in the loss sustained by the death of Her Majesty Queen Victoria, was passed, the members all standing.

Reviews and Notices of Books.

Twentieth Century Practice: an International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D. Volume XX.: Tuberculosis, Yellow Fever, and Miscellaneous. London: Sampson Low, Marston, and Co. 1900. Pp. 906.

WITH this volume the Twentieth Century Practice reaches its appointed end; it now forms a vast work presenting an excellent summary of our present knowledge of medical science. We do not pretend to give an exhaustive review of the volume now before us, but we wish to draw attention to some of its leading features in the way that we have done in dealing with its predecessors.

The subject of Tuberculosis is divided into four sections, each by different authors. The first deals with its bacteriology, pathology, and etiology and is written by Dr. A. J. Lartigau of New York. After an interesting historical survey the author proceeds to give a very complete account of the bacillus tuberculosis, its tinctorial reactions, morphological characters, biology, and cultural characteristics, and then describes the distribution of tuberculous lesions in the body, the histogenesis of the tubercle, and the general pathology of pulmonary tuberculosis. It is most difficult to arrange a satisfactory classification of the various types of pulmonary tuberculosis. The disease may present itself under so many different guises that any classification based on sharp distinctions must necessarily not include a large series of intermediate forms in which are often seen the characteristics of several types. For the sake of simplicity and clearness Dr. Lartigau considers tuberculous inflammations of the lungs under two main headings, miliary tuberculosis and tuberculous pneumonia or "phthisis." This requires several subheadings and consequently the arrangement is not always very clear, but nevertheless after a perusal of the pages devoted to this subject the reader should be possessed of a concise idea of the various pathological changes which may be brought about by the presence of the bacillus of tuberculosis in the lungs.

The remarks on Modes of Infection of tubercle will doubtless receive a considerable amount of attention and we would especially draw attention to the section headed "Inhalation Tuberculosis." The experiments of Villemin, Cornet, and Tappeiner, among others, are considered; the results of some of these would appear to be contradictory, but it is shown that not only can infection be conveyed by the dry sputum carried into the air in the form of dust, but the act of coughing on the part of a consumptive patient is sufficient to contaminate prepared glass slips placed in his neighbourhood.

The symptomatology of tuberculosis is well described by Dr. H. W. Berg of New York, and the diagnosis, prognosis, prophylaxis, and treatment by Dr. J. A. Knopf of New York. The hygienic treatment is minutely detailed and is considered by the author to be the one which has thus far proved the most efficacious and which can be carried out in nearly all climates. Most physicians will agree with the author's remarks on the drug treatment of pulmonary tuberculosis when he says: "There is hardly any substance in the materia medica which at some time or other has not been recommended as an anti-tuberculous remedy. While I do not believe in going to extremes, saying that we can treat pulmonary tuberculosis without any medicinal substances, I think, nevertheless, that we may reduce their number to relatively few." Such is probably the result of all those who have had a large experience in the therapeutics of this disease. Symptomatic treatment stands on rather different grounds and good results may be obtained in correcting anæmia, indigestion, diarrhœa, and in relieving pain and cough.

The article on Yellow Fever is by Dr. Wolfred Nelson of New York. The remarks on bacteriology are instructive. The author has taken much trouble in collating the work which has been done with a view to isolate the pathogenic organism of this disease. After a review of the results published by various investigators he is forced to agree with Agramonte, who is of opinion that the pathogenic microorganism of yellow fever still remains unknown, notwithstanding the reports of observers who believe they have discovered it. He believes that the icteroid bacillus of Sanarelli has no further connexion with it than the bacillus coli communis, and gives his reasons for arriving at a conclusion which is contrary to the beliefs of many competent authorities. Some of these reasons would appear to be powerful ones; for instance, he states that the icteroid bacillus has been found in the tissues of individuals who died from other diseases distinct from yellow fever. If this can be definitely established it would, of course, directly discredit the bacillus as being the essential factor in the causation of yellow fever. Further, Agramonte maintains that the bacillus of Sanarelli does not agglutinate the serum of patients or of convalescents from yellow fever, and that the serum of convalescents from yellow fever does not protect against infection by the icteroid bacillus. It is evident that new methods and new media must be employed in future investigations before the bacteriology of this disease can be definitely established.

Dr. Thomas R. Brown writes an interesting paper on Poisoning with Snake Venom. He attributes death in snake poisoning to the following causes: (1) general paralysis, especially of the respiratory centres; (2) paralysis of the heart by tetanic arrest of cardiac action, probably due to the action of the venom upon the cardiac ganglia; (3) a combination of these causes; (4) hæmorrhages in the medulla; and (5) possibly the inability of the red blood corpuscles to perform their function. With regard to the treatment of snake-bite by antivenene Dr. Brown believes that the practical results so far obtained are of great promise and

thinks it quite possible that a real antidote to snake poison has at last been found.

A short article by Dr. Beaumont Small of Ottawa on Mushroom Poisoning is well worthy of perusal, as is one by Dr. James E. Newcomb of New York on Diseases of the Uvula, Soft Palate, and Faucial Pillars.

The final contribution is by Dr. Francis Warner, on Neural and Mental Defects in Childhood. Dr. Warner's valuable investigations on this subject are well known in this country and the present article summarises his views, which have had, and will continue to have, great weight in all matters dealing with education.

The volume terminates with a general index to the whole work, and in the preface to this volume the editor thanks Dr. Emma E. Walker of New York for the valuable assistance she has rendered in this part of the work. The amount of work entailed in the preparation of this index may in some measure be estimated by the fact that it occupies over 300 pages. We congratulate the editor of the "Twentieth Century Practice of Medicine" on the completion of his task. The whole work has been carried out in an admirable way and will form one of the most important medical works of reference in the English language.

Modern Surgery, General and Operative. By JOHN CHALMERS DA COSTA, M.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia; Surgeon to the Philadelphia Hospital. With 493 Illustrations. London and Philadelphia: W. B. Saunders and Co. 1900. Pp. 1118. Price 21*s.*

WE reviewed the second edition of this work in 1899 and we can speak even more favourably of the present issue. It contains 200 more pages and 100 more illustrations, and may be said to be fully abreast of the knowledge of to-day. The increase in extent has enabled the author to describe more fully many subjects and numerous small alterations have been made which considerably improve the text. The addition of so large a number of illustrations accounts in part for the general increase in the size of the volume; they are judiciously selected and will prove useful to the student. A few of the illustrations are unsatisfactory; for instance, Fig. 430 on p. 1053 is supposed to represent compression of the aorta by an assistant. If the figure shows anything it certainly shows compression of the external iliac artery immediately above Poupart's ligament, or even compression of the common femoral. The point compressed is altogether too low for even the bifurcation of the aorta.

A very good though brief account is given of Gunshot Wounds, and we would especially praise the section on the Use of the Roentgen Rays, in which the author describes Sweet's apparatus for localising foreign bodies. This is a good method, but it involves more trouble than that introduced by Davidson. The index is elaborate and, so far as we have tested it, exact.

A Manual of Midwifery. By ALFRED LEWIS GALABIN, M.A., M.D.Cantab. Illustrated with 298 Engravings. Fifth edition. Crown 8vo. London: J. & A. Churchill. 1900. Pp. 870. Price 15*s.*

THE appearance of a fifth edition of this well-known Manual of Midwifery is to be welcomed. In so widely read a book as this it is essential that successive editions should follow one another with sufficient rapidity to prevent its becoming out of date. The fact that the first edition only appeared in 1886 shows that in the present instance this has been done. The book retains all its prominent features. We imagine the various sections upon the mechanical action of the sacrum, the development of the pelvis, and the leverage action of forceps, containing, as they do, many mathematical considerations, will continue in the future, as in the past, to be skipped by the average student. None the less, they are of great interest and have always been one of the features of the work. The chapters in the present edition that have required most alteration are those upon Extra-Uterine Fœtation, Septicæmia, and Deciduoma Malignum. It is interesting to note that Dr. Galabin's opinion that ovarian gestation is possible may be held to be proved by van Tussenbroeck's case. The classification of ectopic gestation has not, we think, been altered since the first edition, and possibly in time all the forms recognised by the author may be demonstrated as undoubtedly occurring, although even now there are many who question the possibility of primary abdominal fœtation. The bacteriology of puerperal septicæmia is fully considered and the chapter is a good *résumé* of the most recent work upon the subject. We are glad to see that curettage after delivery is condemned and that the performance of hysterectomy in cases of septic infection is regarded with doubt. The author conclusively shows by the mathematical doctrine of probabilities that there is a definite causal relationship between cases of hydatidiform mole and cases of deciduoma malignum. He points out that the nucleated masses of protoplasm seen in some cases of sarcoma of the testis do not form the branching reticulated processes, resembling the proliferating syncytium of villi, which are figured in cases of deciduoma malignum. He considers that the cells of the growth, as well as the protoplasmic masses, are derived from the syncytium of the villi, a view held by Whitridge Williams. This is the more probable, since in many instances there is no absolute demarcation but rather a gradation between syncytium and plainly discrete cells. Some very interesting micro-photographs are given, showing a possible gradation between portions of retained placenta, vesicular mole, and deciduoma malignum. 29 new figures have been added. The whole book shows evidence of careful revision and is well calculated to maintain the high reputation gained by the previous editions.

Atlas Seltener Ophthalmoscopischer Befunde zugleich Ergänzungstafeln zu dem Atlas der Ophthalmoscopie. Von Hofrath Dr. J. OELLER, Professor an der Universität München. Erste Lieferung. 5 Tafeln mit Text. (*Atlas of Rare Ophthalmoscopic Conditions and Supplementary Plates to the Atlas of Ophthalmology.* By Hofrath (Privy Councillor) Dr. J. OELLER, Professor in the University of Munich. The text translated into English by THOMAS SNOWBALL, M.A., M.B. Aberd. Part I., 5 plates with text.) Wiesbaden: Verlag von J. F. Bergmann. Glasgow: Obtainable from F. Bauermeister. 1900. Price 8*s.*

IN the course of last year Professor Oeller completed an atlas of the ordinary diseases of the fundus of the eye, exhibited in 75 plates. The present part is the first of a volume intended as a supplement to that work, which will run to about five parts, each containing five plates. The parts are to be published at irregular intervals as material accumulates and will contain accurate representations of rare and exceptional forms of disease. The divisions of the work will be understood when it is said that the plates will comprise the appearances presented by the normal fundus, the diseases of the optic nerve, the diseases of the retina, the diseases of the choroid, and, finally, congenital anomalies. The plates are very beautifully executed in chromo-lithography and display very minute and delicate details. The first plate is one showing apoplexy of the retina with endarteritis obliterans, thrombosis of the inferior temporal vein, and retinitis circinata. It is of particular interest because it depicts the later condition of a patient whose eye had already been drawn in the atlas of Professor Oeller. Such supplementary illustrations are rare and for that very reason extremely valuable. They give the information which it is particularly desirable that the

ophthalmic surgeon should possess. A considerable number of practitioners, thanks to the excellent cliniques attached to most of our medical schools, are quite competent to recognise the actual conditions that are present in any particular case, but they look to the professed ophthalmologist to give them a reasonable or probable forecast of the future, and to give this he must be guided by his own notes or drawings, or if he be unable to sketch from nature by the illustrations of so accomplished a draughtsman as Professor Oeller, by whom all the plates in this part have been made. In each case, after the description of the appearances presented is given in German, a faithful translation follows by Dr. Snowball of Aberdeen. The first plate affords strong evidence that degeneration of the vascular walls constitutes an important factor in the development of retinitis circinata. The second plate exhibits striæ and detachments of the retina and of the vitreous humour following a wound implicating the sclerotic, choroid, and retina and succeeded by a hæmorrhage, the appearances presented being those seen in the inverted image after the hæmorrhage had undergone absorption. Professor Oeller considers that the striæ, which form a marked feature of the drawing, are formed from individual folds of a previously detached retina which have never become quite smooth but have degenerated into connective tissue. The third plate exhibits the aspect of a case of chorio-retinitis albuminurica. The fourth is a case of staphyloma posticum congenitum with a remarkable vena vorticosa which is lost to view in a groove situated in the white staphylomatous crescent. The last of the five plates is a representation of a disc with an optico-hyaloid cone projecting from it. It appears to be stationary, as no change has been observed in it for several years. If the promised parts contain drawings of equal interest with those now issued the volume will prove a very valuable accession to ophthalmoscopic literature. Messrs. Bergmann may be complimented on their fine reproductions of Professor Oeller's delicately finished coloured drawings. Is it impossible to get such plates executed in England?

LIBRARY TABLE.

Beiträge zur Beurtheilung der Bedeutung der Vaginalen und Sacralen Total-Extirpation des Uterus für die Radicalheilung des Gebärmutterkrebses. Von Prim. Dr. HERMANN VON ERLACH und Dr. HANS R. VON WOERZ. Wien: Seidel und Sohn. 1901. Pp. 112. 8vo. (*Contributions to the Discussion of the Value of Vaginal and Sacral Total Extirpation of the Uterus for the Radical Cure of Cancer of the Uterus.*)—Dr. Hans R. von Woerz records the results of 131 vaginal hysterectomies for carcinoma of the uterus. 10 patients, or 7·6 per cent., died as a result of the operation. Of the remaining 121 he was able to trace 115. Of these 62, or 53·9 per cent., were alive and well at the time the figures were collected. Four had died from other diseases and 49, or 42·6 per cent., had died from recurrence. No recurrence had occurred in any case after the lapse of three and a half years from the time of the operation. Of the cases which had remained well in 30 a period of more than three and a half years had elapsed since operation. The frequency of recurrence in cancer of the porto-vaginalis he found to be 43·7 per cent., in cancer of the cervix 50 per cent., and in cancer of the body of the uterus 18·2 per cent. Dr. Hermann von Erlach in his paper gives the results of 27 cases of cancer of the uterus operated upon by the sacral method. Five patients died as a result of the operation, four could not be traced, and one died from tuberculosis. Of the remaining 17 patients 10, or 59 per cent., died from recurrence, while seven, or 41 per cent., remained alive and well. Of these in four cases more than three and a half years had elapsed since operation. The indications for and against vaginal hysterectomy and the sacral operation are discussed by the authors.

Sanity of Mind: a Study of its Conditions and of the Means of its Development and Preservation. By DAVID F. LINCOLN, M.D. New York and London: G. P. Putnam's Sons. 1900. Demy 8vo, pp. 184. Price 5*s*.—This is a type of book of which the present day is peculiarly productive, but, unlike many others of its kind, it deserves notice, both for the matter which it contains and for the form in which it is presented. It deals in a somewhat discursive but suggestive way with the important problems of education, heredity, mental degeneracy, and insanity. The theme is presented in such a form that it can be readily apprehended and appreciated. There is something in the mental attitude of our day which makes it easier to discuss the problems touched upon in this book than it was a generation ago. We have outlived the period of metaphysical analysis and classification; we have begun to study insanity, not merely as philanthropists, but from the point of view of husbanding the State's resources and of extinguishing the evil by practical legislation. This attitude is shown throughout the book. The subject of degeneracy is especially well treated by the author and many judicious observations are made on education and mental development. The concluding chapter deals with social and civic duties. This little work deserves careful reading; it appeals alike to the cultured layman, the psychologist, and the physician as the product of a thoughtful mind keenly alive to the medico-psychological and social problems of the day. The writing is throughout marked by lucidity and even grace.

St. Bartholomew's Hospital Reports. Vol. XXXVI., 1900. Edited by NORMAN MOORE, M.D. Lond., and D'ARCY POWER, F.R.C.S. Eng. London: Smith, Elder, and Co. 1901. Pp. 350 + 240.—The volume of these reports for 1900 opens with two obituary notices, the one by Mr. Howard Marsh of Sir James Paget and the other of Sir R. Thorne Thorne. In all there are 19 original articles, of which perhaps the most striking are that by Mr. D'Arcy Power entitled "The Lessons of a Year's Surgical Experience"; a Case of Landry's Paralysis, by Mr. J. Preston Maxwell; and a Case of Myasthenia Gravis with Autopsy, by Dr. F. E. Batten and Dr. H. Morley Fletcher. Mr. Preston Maxwell considers that the case reported by him supports the view that Landry's paralysis is due to a toxin acting upon the motor neurons of the spinal cord. The case was that of a Chinese woman, aged 62 years, who took to opium smoking for the relief of pain and who, although she had never smoked before, began with half a drachm a day, a dose which was continued for 10 days when itching of both feet and obstinate constipation ensued. She had felt no narcosis, but the pipe was stopped and two days later she began to lose power over her feet. The usual statistical tables and details of additions to the museum make up the volume.

Chirurgie du Rein et de l'Uretère. Par le Professor JAMES ISRAEL, chirurgien principal de l'Hôpital Israélite de Berlin. Traduction du Dr. GUILLERMO RODRIGUEZ, de Valparaiso. Préface du Dr. J. ALBARRAN, professeur agrégé à la Faculté de Médecine de Paris. Avec un résumé de 230 opérations rénales, 2 planches en couleur, et 2 gravures intercalées dans le texte. (*The Surgery of the Kidney and the Ureter.*) Paris: Société d'Éditions Scientifiques. 1900. Pp. 210. Price 7 fr. 50 c.—Professor Israel's "Surgery of the Kidney and Ureter" is well known to all who have especially devoted their attention to this subject, but its value would have been more extensively appreciated if more surgeons in this country were able to read German. Therefore we welcome the appearance of this French version, for the latter language is more widely understood. The work is based on 81 operations on the kidney and ureter

performed during the 10 years 1882 to 1892, and complete tables are supplied containing particulars of all these cases. All the opinions expressed are those held by Professor Israel himself, for very little space is devoted to the discussion of controverted points. The translation is good and the book should prove of interest to many readers.

Practical Household Cookery Recipes. By A. M. WESTCOTT. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1900. Pp. 94. Price 1*s.*—This little book contains household recipes, most of which seem very good. There is a section which more nearly concerns medical readers—namely, that headed "Invalid and Convalescent Cookery." In this good recipes are given for such dishes as the various forms of beef-tea, barley-water, lemonade, and other suitable foods for invalids. With regard to the recipe for lemonade, we think that the juice of one lemon is a rather small allowance for one and a half pints of water, although lemons are not uniform in size; also, in our opinion, it is better, in order to get the flavour of the oil of lemons, to grate the peel after the lemon has been washed than to pare it off with a knife. If pared the lemonade is almost sure to have a slight flavour of the steel knife and it is difficult to avoid getting some of the white portion of the peel which makes the lemonade taste bitter.

The Convalescent's Diet. By LUCY HELEN YATES. London Virtue and Co. 1901. Pp. 96. Price 1*s.*—This is a sensible little book and the introduction is practical. On p. 19 we find the following, which at first sight is startling: "We find iron very largely in spinach ..... mercury also contains it." It would be as well, we think, in future editions to substitute the words "herb mercury" and explain what herb mercury is. We suppose that Miss Yates means the *Chenopodium Bonus-Henricus*, or Good King Henry, which is sometimes used as a substitute for spinach. The *Mercurialis* which belongs to the *Euphorbiaceæ* is not, so far as we know, used for food. The recipes seem very good, but we cannot agree with the statement on page 9 that rabbit is digestible. Some persons can digest it and some cannot, the ability to do so being a matter of idiosyncrasy.

JOURNALS AND MAGAZINES.

IN the *Medical Magazine* for February Mr. J. Foster Palmer concludes his articles upon Modern Epidemics and is hopeful that in the future typhoid fever will be abolished to the same extent that typhus fever has been. His sanguine expectations are based more upon the efficacy of general sanitation than on the influence of personal measures such as inoculation, though with regard to the latter he holds definitely favourable opinions. Mr. Edmund Owen contributes a short but discursive article on Some Tuberculous Affections of Children and Dr. Allchin continues at some length to consider the reconstruction of the University of London. Another university, that of Oxford, is pleasantly, but without much profit, considered by Mr. J. H. Crespi, who discusses this ancient seat of learning as an entrance to the medical profession. The matter is not very deeply entered upon, as the writer strays easily into pleasant quadrangles and is drawn away by the social fascinations of undergraduate existence. The Suppression of Malaria is the subject of an article by Dr. Arthur R. Waddell, who makes interesting observations upon this problem as it affects the enormous areas of Asia and the more confined ones of European malarious districts.

In accordance with the methods laid down for its future in the January number of the *Practitioner*, one special subject is considered in all the chief original articles of the February issue, the subject being Medical Examinations for Insurance. Dr. T. Colcott Fox considers the special functions of the medical examiner and his conclusions are in the main the same as those arrived at from the opposite point of view by Mr. James Chisholm. Both are undoubtedly right in affirming that what is wanted from the medical examiner is a record of: (1) facts of the patient's case from all medical points of view; and (2) the impressions of the examiner. Mr. Chisholm, however, thinks that no judgment is required as to expectation of life, this being left to the combined judgment of the chief medical officer of the company and its actuary. Mr. Chisholm's long article will be read with much benefit by all medical men who are called on to make these examinations. He thinks that it is unwise for the usual medical attendant to be an examiner of his patient. We quite agree with him. Dr. T. Glover Lyon gives model forms for life assurance as drawn up by the Life Assurance Medical Officers' Association. Dr. J. J. Perkins discusses the purely medical aspects of life assurance in a comprehensive article, and Mr. J. Jackson Clarke deals similarly with the surgical side of the matter. Some of Mr. Clarke's deductions, if carried to their logical limit, seem to us hard upon candidates. In his view hammer-toe, for instance, as an indication of rheumatoid arthritis would considerably prejudice a "life." Thomas Sydenham, as the Medical Hero of the Month, is the subject of an attractive little article that is in the main abstracted from Dr. J. F. Payne's admirable book on the famous physician. Dr. Arthur Newsholme's conclusion on the Influence of Soil on the Prevalence of Pulmonary Phthisis is that this influence is limited to the action of wet soils as a predisposing cause through the tendency to catarrhs of respiratory mucous membranes that such soils occasion. Dr. H. D. Rolleston discusses Recent Literature on Diseases of the Digestive Organs—congenital pyloric obstruction, tumours of the appendix, and chronic pancreatitis being the most important conditions referred to.

New Inventions.

SANITARY PAVING MATERIAL.

WE have received specimen blocks of a sanitary paving material for which several important claims are made. Already this material has been employed in many large and busy streets with satisfactory results after several years' trial. We have carefully examined specimen blocks taken up from a busy thoroughfare in London where they had been laid down in 1897. From a section of one of these blocks it is quite clear that the material is absolutely non-absorbing. The "business" surface of the blocks was just veneered with a film of the usual road deposit which readily detached on passing a stream of water over it, leaving it quite clean. The blocks are exceedingly heavy and are denser than the hard woods commonly employed for the same purpose. They appear to consist of small pieces of granite fixed in a bitumen-like bed. The compost is nearly black and the surface practically radiates no light or heat. Apparently the blocks never wear smooth to a slippery degree and thus they afford an excellent foothold for the horses while at the same time they become sufficiently smooth to render traffic as silent as possible. The surface is easily cleansed. It is stated that the blocks being laid closely together the small space between them is soon closed by compression under traffic which prevents the ultimate absorption of noxious liquids. It seems to us that any noxious liquid that might leak in at first would be enclosed by the same process. However, an examination of blocks that have been in use for three years scarcely justifies the view that liquid sweepings are thus enclosed, but rather that the spaces are so quickly closed as to avoid this possibility. The material is exceedingly durable and, as far as we are able to judge, excellently adapted for the purpose, chiefly because of the cleanly state of the street which its use as a paving roadway should secure, assuming that the blocks are properly laid. Its properties are such as to reduce to a minimum the formation of mud and dust. The Sanitary Block and Tile Pavement Company, Limited, of 17, Victoria-street, Westminster, supply the blocks.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 23, 1901.

The Constitution of the British Medical Association.

IT has been apparent for some time past that the British Medical Association is not in a state of rest. It is prosperous in the sense of numbers, its annual meetings are successful, and its journal maintains its high character. But for various reasons there has been a feeling of antagonism between the executive of the Association—i.e., its Council—and a considerable section of the members of the Association. The dissatisfied members have complained of absence of sympathy on the part of the Council with the views and wants of the rank and file of the Association, and also of the need of effective means for bringing the Council more into contact with the members and for subjecting it more effectively to the wishes of the members in the promotion of their views of policy. This antagonism came to a crisis in July last, when it was proposed to make the Council as far as possible the only authoritative body in the Association under a new set of articles of association. This proposal of the Council failed to secure support at an extraordinary general meeting of the Association; and at a general meeting held at Ipswich during the annual congress of the Association a strong committee was appointed to consider and to report upon the "best means of reorganising the constitution of the British Medical Association."

The provisional report of this committee, known as the Constitution Committee, is given in the form of a supplement to the *British Medical Journal* of Feb. 16th. To understand its essential proposals it is necessary to be familiar with the existing constitution of the Association. This cannot be set out in the course of an article, while it is familiar to most of our readers. It will be sufficient to recall the salient features. The present working organisation of the British Medical Association consists practically of the Council and the branches. The Association is believed to have over 17,000 members. Only two-thirds of these are members of the branches. The Association is actually a limited company and its Council practically a board of directors. The majority of the members of the existing Council are elected by the branches, but Vice-Presidents and officers add materially to its composition. The branches are of varying size and cover areas of varying size. They are often referred to by the Council for their opinion, but their decisions need not be followed by the Council. An annual meeting is held, and the time is mostly occupied with scientific discussions and social functions. But three general meetings of the members are also held during the annual congress, and at these the business of the Association is discussed upon the presentation of the annual report and the statement of accounts. Resolutions are passed by the members at these general meetings and, according to counsel's opinion, the Council is bound to give effect, as a general rule, to such resolutions if due notice be given of the motions from which they arise. The counsel of the Association, Mr. FRANCIS B. PALMER, in April of last year expressed the opinion that to give such powers to general meetings, which are often small and fortuitously composed, is "unsuited to a concern of this magnitude and exposes the interests of the members at large to grave peril." Both the Council of the Association and the members who most actively resented the new articles suggested by the Council seem to have agreed that the general meetings of the Association were not suitably organised for the expression of the views of the great body of members. The perception of this by two parties in the Association, taking for the most part different points of view, has led to the chief suggestions of the Constitution Committee.

The Constitution Committee in their report propose a scheme of which the following is a summary. They contemplate a change in the constitution of the Council, reducing the number of *ex-officio* members, and making it more representative of the rank and file of the Association. Units of local organisation, corresponding for the most part to Parliamentary divisions, and so covering areas of moderate extent, are to be created, and the divisions are to be grouped to form branches. Henceforth there are to be no unattached members of the Association, but every member of the Association is *ipso facto* to be a member of the division in which he resides and will have no excuse for not attending the meetings of that division. The most striking recommendation of the Constitution Committee has reference to the means for giving importance to the opinion of divisions. Obviously the divisions are too numerous to send representatives to the Council. But each division is to be empowered to elect annually a delegate, who will represent the division at a meeting of delegates to be held annually at the same place and time as the annual general meeting of the Association. This meeting of delegates is to have special charge of medico-ethical questions and will have to consider reports of the Council and other matters connected with the business side of the Association, finance and the editorial management of the journal being expressly placed without its jurisdiction. Much is expected of the delegates under the new scheme. They will be required to vote on every question in accordance with the views of their constituencies expressed in resolutions at divisional meetings within a period of three preceding months. The delegate is to have a vote according to the numbers of his division, so that one delegate will differ from another delegate in importance. The quorum of the annual meeting of delegates is to be one-half of the total number of delegates, and their resolutions to be binding on the Council must be carried by a majority of two-thirds. The vote of the annual meeting of delegates on the subjects within their competence is to be guiding as a matter of policy on the Council, who, however, are to be given a power of *referendum* where it is of opinion that the delegates have exceeded their powers or

have recommended a course that would be injurious to the interests of the Association. The travelling expenses of delegates in attending the annual meetings will be paid out of the funds of the Association and will come to a very considerable sum—perhaps £3000 per annum.

Working constitutions are not made by abstract resolutions, and we heard with concern of the duty imposed on some two dozen gentlemen to "reorganise the constitution" of the British Medical Association. According to our view, a constitution has to be evolved, to grow, to be altered and adapted from time to time to meet new circumstances. The question is whether the scheme of the Constitution Committee of the British Medical Association is one of natural evolution. We doubt it. We are impressed with the boldness of those who have cast the constitution of a prosperous Association into the melting-pot. But we hasten to say that the report of the committee and the discussions which led up to it are imbued with moderation and a sense of responsibility. A respect for the views of others is shown that is worthy of the occasion and forms the best argument for the committee's recommendations. We hope that the report will be considered carefully by the branches and that, if the scheme of the Constitution Committee is adopted in whole or in part, the innovations will be given a trial in the same spirit of moderation as that in which they are put forward. Otherwise we should expect the executive of the Council to suffer and in time to be composed of inferior men, who would be the willing victims of dictation and delegation. It is this aspect of the report which most demands attention.

The Housing of the Working Classes in London.

THE housing of the working-classes is not only one of the most urgent questions from a medical point of view now clamouring for attention from the Legislature, but it is also a question in which the KING takes a deep personal interest. The London County Council has attempted to put before the public a complete history describing what has been done in the metropolis for the h using of the working-classes, and in view of the reference made to the whole matter in the Speech from the Throne the action of the Council is seen to be very opportune. The volume published by the Council formed the basis of a series of articles which we recently published.[1] But the subject is so complicated and of such extreme medical importance in so many directions that we make no excuse for recurring to it. Its difficulty is well proved by the fact that even Mr. C. J. STEWART, the clerk of the Council, Mr. W. J. RUSSELL, and Mr. M. H. COX, LL.B. Lond., who together prepared the volume in question, had great difficulty in obtaining correct figures, especially in regard to the actual numbers of persons for whom new and better dwellings have been or will be provided. So many records have been kept, drawn up at different times by different authorities and embracing various schemes or sections of schemes, that the figures given fail to agree. Indeed, it was not until after the bulk of the work had gone through the press that a final and corrected set of figures was obtained and added in an Appendix. Hence the statistics given in different parts of the book do not tally, the figures, for example, on page 328 do not agree with the figures published on page 43. If those who are at the very fountain-head of information may thus be led into error it is no wonder if outside critics are at fault. Yet if we abstain from detail and content ourselves with a broad generalisation the position becomes sufficiently clear for practical persons to discuss it, and the acrimony that has been imported into the question by some seems to us quite unnecessary. To recapitulate the facts briefly, the Metropolitan Board of Works cleared 51 acres of insanitary areas on which 29,056 persons were living. It did not itself attempt to re-house these persons, but sold the land to artisans' dwellings companies for some £377,000. This left a loss on the cost of the clearances of £1,605,088, money which the ratepayers have to pay and for which no direct financial return will be obtained, though indirectly, there will accrue all the advantages which result from a general improvement in the public health. The companies to whom the Metropolitan Board of Works sold this land re-housed 27,780 persons. When in 1889 the County Council replaced this authority the artisans' dwellings companies had exhausted their powers of action, and no one could be found to purchase the land on which clearances had been or were to be made for the carrying out of the legal obligation to build only workmen's dwellings. Therefore the County Council had to replace private enterprise and itself build and let out in tenements the required dwellings. At a dead loss of £1,045,050 the County Council cleared 31 more acres and the local vestries nine more acres, making, with fractions added, a total clearance since 1875 of 94 acres. The County Council have re-housed or provided for the re-housing of 34,196 persons and the vestries have similarly dealt with 2452 persons, giving (with the 27,780 persons mentioned above) a grand total of 64,428 persons who have been or will be re-housed by the schemes adopted since 1875 and up to March, 1900. Since then further schemes have been adopted by which probably some 3000 more persons will be housed. More land is being purchased for this purpose.

Such are the facts, and though they represent a very vast undertaking its insufficiency to deal with the problem of housing the London poor is painfully evident. The population of London is said to have increased to the extent of 700,000 since 1881. This means a "submerged tenth" amounting to 70,000. There must be in the metropolis by this time some 500,000 persons who cannot afford to pay a sufficiently high rent to secure healthy houses. The common lodging-houses may provide for from 28,000 to 30,000 of these, and the workhouses and workhouse infirmaries for a larger number. The number of paupers in the metropolis during last year was estimated at 125,000. Still a formidable balance remains. To put the matter crudely, the question is whether the ratepayers of London are going to pay a portion and in some instances the whole of the rent for the housing of about 500,000 persons. If not, how are these people going to be compelled to live in healthy

[1] THE LANCET, Jan. 12th (p. 124) and 19th (p. 205), and Feb. 2nd (p. 351), 1901.

homes? The position seems hopeless if only because of the extravagant cost of effecting the clearances and of purchasing land and houses. With the exception of the inmates of the workhouses and those few who contrive to sleep on doorsteps, in the parks, in passages of houses, or in unlet vacant houses, all these extremely poor people not only pay rent but, in comparison with the accommodation given, very high rent; while all enterprise directed towards providing them with decent accommodation at moderate prices is handicapped by heavy initial expenses. For clearances effected under Part I. and Part II. of the Housing of the Working Classes Act of 1890 there are clauses tending to reduce these expenses, but the places cleared must first be condemned as insanitary; and the land must be sold though there may be no purchasers forthcoming even when the land is offered at a quarter or a third of the cost of effecting the clearance. When purchasing land under Part III. of the Act the local authority may retain it in perpetuity, but then the system of compensation is that set forth by the Lands Clauses Consolidation Act of 1845. This means that unless a friendly agreement is made each side nominates an arbitrator. Both arbitrators receive a fee of 50 guineas for valuing the property and invariably they disagree. Then they appoint an umpire who charges 50 guineas a day. Expert witnesses are called and they cost about £40 each. The total expenses, with the solicitors' fees, rarely amount to less than £1000, and the entire property may not be worth more than £3000 or £4000. There is an unwritten law which sanctions an addition of 10 per cent. on the estimated value as a sort of compensation for disturbance. Thus it may safely be said that if a local authority wishes to buy under Part III. of the Act a property worth £4000, and fails to effect a friendly agreement, it will have to pay in all some £5000. Evidently there is need here for further legislation. The great cost of arbitration might be avoided by simply taking the rateable value of the property to be purchased as the basis of the compensation to be paid, but this is a drastic suggestion not likely to be followed unless the owners of London house property find their pockets actually affected by the difficulties arising out of the housing of the poor. The compulsory purchase at a very low price of such property as has become so degraded as to constitute a real danger to the public health ought, however, to be a legal possibility. When the speculator on the extreme misery of the poor has allowed his property to degenerate into a public nuisance and danger, what right has he to receive handsome compensation? On the other hand, seeing that the local authority can no longer sell the land it purchases under Part I. and Part II. of the Act, it should be officially recognised that it has the right to keep such land just as if it had been purchased under Part III. of the Act. Such powers would greatly lighten the difficulties of municipal enterprise, and it is all the more necessary to demand these facilities, as municipal enterprise is now the only form of enterprise which in London shows any disposition whatsoever to deal with the question.

If we have spoken at such length on the financial difficulties it is because they constitute the main obstacle to the housing of the poor and of the working-class. Though these are matters that should, strictly speaking, be dealt with by political economists, still the sanitary reformer is invariably met with financial objections raised against his proposals. So far as the purely sanitary aspect of the question is concerned there are no difficulties any longer. On the contrary, every metropolitan borough now possesses an able medical officer of health receiving a salary that secures his independence. All these sanitary officials have gone through the same training and possess a uniform and special technical knowledge of the laws of hygiene. So far as the work of the medical profession is concerned, all competent medical officers of health can speak out as with one voice. The conflict of opinion arises only when we quit the domain of sanitation to tread on the uncertain ground of political economy. Unfortunately the two are inextricably linked together. It does not suffice to condemn overcrowding, bad drainage, and ineffective ventilation. It does not suffice to say how houses should be built and drained. The money must be found before these improvements can be effected, and that is why the progress realised has been slow as compared with the necessities of the case. But it is satisfactory to feel that in future there will be no delay due to the health service of the metropolis. The London local authorities no longer content themselves with merely pretending to observe the law by paying a nominal salary to a medical man who best satisfied his employers when he did as little as possible. London can now boast of a really efficient staff of independent medical officers of health, and it will not be their fault if greater progress is not more rapidly accomplished than heretofore.

Some Points in the Metropolitan Water-supply of 1900.

THE December report on the condition of the metropolitan water-supply presented by the Water Examiner to the Local Government Board has just been published. The Thames water at Hampton, Molesey, and Sunbury was in good condition during the greater part of the month, but from the 1st to the 6th and from the 9th to the 28th days of the month it was more or less turbid. The engineer of the Chelsea Waterworks Company keeps a daily record of the state of the river at the intake of that company, and as the amount of water supplied to their customers is less than that which they are authorised to draw they are able when the river is in an unsatisfactory state to close their intake for several days at a stretch. According to the report of the engineer of the Chelsea Company the state of the water was "indifferent" on the 6th, 8th, and 29th days of the month, and "bad" on the 30th and 31st, and on four days during the month no water was taken from the river by the company. The East London Waterworks Company have an intake from the Thames and usually abstract from the river about 8,000,000 gallons per day. There is no reservoir for the storage of this water, and it therefore follows that water described by the Chelsea Water Company's engineer as "indifferent" and "bad" was presumably taken by the East London Company and allowed to pass straight to their filter-beds without undergoing any process of sedimentation. The

Water Examiner says in his report that all the samples of the water collected at the works of the companies were efficiently filtered. It is not, however, stated that the chemist employed by the Local Government Board collected any of the water which was obtained from the filter-beds of the East London Company during the time at which the natural river water was in an indifferent or bad condition. We should be interested to learn what the quality of the filtered water was on these occasions. It may, perhaps, be well again to point out[1] that the water from the Thames station of the East London Company passes through a main about 19 miles in length to a covered reservoir situated in Finsbury Park, and that the same reservoir is supplied also from the Lee Bridge station of the company. Armed with this knowledge the Water Examiner and chemist appointed by the Local Government Board will be able to see in what manner they can best obtain accurate information as to the state of the Thames-derived water supplied by the East London Company. It is true that neither the Water Examiner nor the chemist have any right of entry into the premises of any one of the metropolitan water companies, but it has many times been stated that no impediments have ever been placed to their access to all parts of the companies' works. It does not appear, therefore, that there is any reason why this matter, to which we have before called attention, should not be investigated at the earliest opportunity; that is to say, during the next period at which the water is turbid.

During the year 1900 little progress has been made by some of the metropolitan water companies towards giving a continuous supply of water to all their customers, a duty which they are now under a statutory obligation to perform. The Chelsea and Grand Junction Companies profess to give a constant supply to all their customers, and the East London Company to 99 per cent. of theirs. The Kent Company at the end of the year 1900 supplied 92 per cent., which may be compared with 91 per cent. supplied at the end of the year 1899. The Kent Company, it is fair to point out, supply a number of people who live at high levels on hills scattered over a considerable area. This cannot be said in the case of the Lambeth Company. At the end of the year 1899 this company gave continuous supply to only 75 per cent. of their customers, and at the end of the year 1900 they supplied only 76 per cent. It is much to be hoped that the local authorities, or the customers themselves, who now have power to insist on having a continuous supply, will use their privilege in this respect. The customers of this company cannot be congratulated on the way in which they allow themselves to be treated. Month after month we find that the water supplied by the Lambeth Company, as compared with the water of the other companies, exhibits the deepest average tint of brown, a fact which points to inadequate treatment of the Thames river water. It cannot be pleaded on behalf of the company that they are not sufficiently paid, for the charges which the company are allowed to make are higher than those allowed in the case of any other company. During the year 1900 the New River Company have extended their constant service to the extent of 3 per cent. of the total supplies—that is to say, 95 instead of 92 per cent. of all their customers now have a constant supply. It may be remembered that parts of the City of London had a short time ago only an intermittent supply, but it was stated that constant service was being largely extended. During the year no improvement in this respect has been made in the case of the Southwark and Vauxhall Company—93 per cent. of their customers had constant service at the end of December, 1899, and the same proportion at the same date in the year 1900. Of all the metropolitan companies the greatest improvement in regard to the giving of a constant service has been made by the West Middlesex Company, of whose customers 98 per cent. instead of 93 per cent. are now constantly supplied, an improvement of 5 per cent. of the total number.

The report of the Water Examiner shows that the tint of the water supplied by the companies has varied within considerable limits; the proportion of brown tint as seen in a two-foot tube ascertained by comparison with the standard tint of brown has ranged from 4 degrees to 18 degrees. Dr. THORPE, the chemist appointed by the Local Government Board, reports that all the samples taken from the mains of the Chelsea, West Middlesex, Southwark and Vauxhall, New River, and Kent Companies were clear. One sample each of the East London and Grand Junction Companies, and two samples of the Lambeth Company's water, contained a few particles of iron rust, and a sample of the Lambeth water taken at Brixton was finely opalescent and contained a minute trace of suspended inorganic matter and a few infusoria. It would be well if the Local Government Board were to make provisions by which their water analyst would be enabled to make a much larger number of examinations than he does at present. Any so-called economy displayed by the Local Government Board in declining to provide sufficient money for the proper payment of their skilled analyst would be a great mistake. It is essential for the interests of the water consumers of London that a thorough examination should be constantly made of the water which is supplied to them, and under the existing conditions the officers of the Local Government Board are allowed facilities for visiting the companies' works which are not possessed either by the County Councils or by any other metropolitan authority. Up to the present time we understand that no difficulties have at any time been made by any of the companies as to a thorough examination of all their works by the officers of the Local Government Board. It is hardly to be supposed that they would now adopt so unwise a course, but should they do so the President of the Local Government Board would not have the slightest difficulty in passing those further measures of control which have already been recommended by two Royal Commissions and which we think should be embodied in a Bill and passed without delay.

[1] THE LANCET, May 8th, 1897, p. 1292.

PLYMOUTH BOROUGH INFECTIOUS DISEASES HOSPITAL.—At the meeting of the Plymouth Borough Council held on Feb. 12th it was decided to enlarge the Borough Infectious Diseases Hospital at an estimated cost of £3512. At present the hospital contains only 32 beds; the additional accommodation will consist of two pavilions containing 10 and 22 beds respectively.

Annotations.

"Ne quid nimis."

THE ROYAL COMMISSION ON THE SOUTH AFRICAN HOSPITALS.

THE report of the Royal Commissioners upon the South African Hospitals appeared at that sad moment when all our thoughts were fixed upon the historic event taking place at Osborne House. The report did not, therefore, immediately receive the attention that was its due, but such attention will no longer be withheld from it. It is abundantly clear from the discussions which have taken place and which will continue to take place in both Houses of Parliament, and from the correspondence in many journals, that the public are awaking to the conclusion that the report is an exceedingly interesting document. Its importance may be gauged from the character of some of the criticism with which it has met. We begin this week to lay a full abstract of the report before our readers. Parts I. and II. of the report, which lend themselves to greater condensation than the remainder of the report, will be found on page 573 of the present issue, in abstract. The gist of Parts III. and IV., which will have to be published at greater length, will appear next week. We shall then proceed to deal with the report.

THE RELATION OF CRIMINALITY IN THE OFFSPRING TO ALCOHOLISM IN THE PARENTS.

DR. L. ROBINOVITCH, formerly assistant physician at the St. Anne Asylum, Paris, contributes to the December, 1900, number of the *Medico-Legal Journal* of New York a paper on the above subject and makes an attempt to trace the "extent to which alcoholism in the parent is responsible for that psycho-pathology in the offspring which manifests itself in criminality." The clinical material examined consisted of the histories of persons sequestrated in asylums and prisons. In order to avoid confusion, however, it was necessary to exclude from consideration those persons whose mental condition made them wholly irresponsible for their acts, such as those who had committed crimes under the influence of insane impulses and delusions in all their varieties, or who were the subject of organic mental derangements or chronic alcoholic insanity, or who exhibited symptoms of congenital mental and moral deficiency. In a word, those persons were excluded "whose vicious deeds were committed without intention or forethought of malice and intent." Thus of 50 criminals admitted to the St. Anne Asylum during the two years 1898 and 1899 and fulfilling the above conditions the clinical histories were characteristic, and the following may be quoted as a typical case. A man, 27 years of age, was the son of a drunkard. The father was addicted to the use of absinthe and was a man of abusive and violent disposition towards his wife, the latter being a woman of normal disposition and of good bodily health. There were seven other children of the marriage in addition to the patient. Of these, one, a girl, was feeble-minded and became the mother of an illegitimate child, one boy was timid and odd in conduct, while another boy and a girl were dull and incapable of earning a living. The patient's paternal aunt was melancholic and suffered from attacks of depression and crying, and his uncle was insane. His grandmother on the mother's side was markedly irritable and suffered from intense mental depression. The patient was born at full term, walked at the age of three years, and began to talk at the age of five. At the age of 16 he began to exhibit vicious propensities, frequented disreputable places, and was convicted of attempts at rape on young children. At the age of 18 he enlisted as a volunteer but was discharged afterwards for larceny. He took to drinking and was placed as a patient in an asylum, whence he escaped shortly after admission. "From that time on he continued gravitating from asylum to prison and back again." After every discharge he would commit a crime, be caught and sent again to prison. He was addicted to absinthe-drinking and suffered now and then from epileptiform attacks. He was, moreover, an expert simulator of these convulsions and had succeeded in deceiving physicians. He passed successively through the asylums of Villejuif, St. Anne, Ville Evrard, and Bicêtre as a patient and was detected in the practice of unnatural sexual crimes. When living outside he consorted with prostitutes on whom he depended for maintenance. He associated with thieves, and attempted murder, and was eventually placed in the St. Anne Asylum. Degenerate, depraved, with perversion of both instincts and moral sense, his life was one continuous manifestation of criminality and vice. He was arrested more than thirty times and his admissions to asylums were still more frequent. In a second case, that of a boy, aged 10 years, the son of an alcoholic father, the symptoms were excessive passion and temper, destructiveness, and attempts at arson, all manifested in childhood. He contracted vagrant habits when a boy and attempted to kill another boy, lying in wait for 12 days near the latter's residence. From a detailed statistical analysis of such histories Dr. Robinovitch concludes that in the vast majority of cases (over 90 per cent.) alcoholism existed only on the father's side. Of a total of 127 children 50 were fit for asylum or prison and formed the material for the present study, 40 died in infancy or prematurely, and 37 were living. Of the 37 living, 27 were in good physical condition. The rest suffered from meningitis (four cases), convulsions (three cases), or other forms of disease, and one of them was beginning to manifest criminal instincts.

THE MEDICAL OFFICER OF HEALTH AND THE PLAGUE AT HULL.

AT a meeting of the Hull Sanitary Committee held on Feb. 15th a gratifying communication was read from the Foreign Office stating that the foreign representatives in London of the parties to the Venice Convention had been notified that the plague at Hull had now ceased. Mr. W. Holder said that he thought that the fact of the prompt stamping out of the plague, the saving of probably hundreds of lives, and the conserving of the trade of the port should not be allowed to pass without the committee marking in some way their appreciation of the energy and services rendered by the medical officer of health, Dr. John Wright Mason. Dr. Mason of recent years had had to meet in behalf of the city of Hull assaults of cholera, small-pox, and plague, and he considered that Hull was deeply indebted to him. A sub-committee was appointed to consider what form the testimonial should take. We congratulate Dr. Mason most warmly both upon the success which has attended his efforts to arrest the plague and also upon the fact that his services are duly recognised by those whom he serves —a state of matters which is not so common as it should be. The post of a port medical officer of health is nowadays singularly arduous and responsible. Owing to the facilities which modern invention gives for intercommunication among the nations the march of epidemic diseases is infinitely more rapid than it used to be. For us in these islands infection is always at our doors. The "shuttles of an empire's loom" weave their web across every sea and ocean, and there is always the chance that plague, yellow fever, or cholera may accompany their course. Coincidently with Hull being

declared free from plague a Peninsular and Oriental mail-steamer came into Plymouth reporting that one of her crew had died from plague before the vessel left Bombay. No fresh cases had occurred, but all the passengers and crew were carefully inspected and the names and addresses of those who wished to disembark were recorded. So the work goes on—attack and repulse follow one another all round the coast; therefore let us remember with gratitude the unwearying watchfulness of our port medical officers.

THE CASE OF HENRY DAVIS.

ON Feb. 15th, Henry Davis of 309, Portobello-road and 25, Oxford-gardens, was convicted on a summons charging him with wilfully and falsely pretending to be and using the title of "Doctor," thereby implying that he was a registered medical practitioner. Mr. Curtis-Bennett, a London magistrate of long experience, according to the report before us described the case as the worst he had ever had before him and fined Davis £20 with 10 guineas costs. The nature of "Dr. Davis's" business had been fully explained to the learned magistrate; his excuse for using the title "Doctor" was said by his counsel to be a diploma from Berne University, but the exposure of his methods by the prosecution somewhat discounted the value of this statement. A bottle of sham "medicine," for instance, sold by Davis as of special virtue for 17*s.* was practically the same as another sold by him for 4*s.*, while full explanation was given of his traffic in "pills a boon to womankind." "Dr. Davis" is one of the oldest and most constant advertisers of these pills. In our series of articles on Quacks and Abortion we dealt with his goods in detail[1] giving their analysis. This certainly did not prove them to be effective abortifacients, but the literature which accompanied them showed that they were sold, and likely to be taken, as such. They were "Famous female pills," "the most effective in the world." There was the usual indication of the character claimed for them supplied by the warning that they were not to be taken by those expecting to become mothers, and on the same sheet of paper was the advertisement of a book invaluable for women, entitled, "How to Limit your Family and Woman her Complaints." While to some extent the business of Henry Davis may suffer by his being obliged to drop the title "Doctor," and while the proceedings taken may to some extent act as a deterrent to him, it seems to us a matter of regret that such a trade as his should be permitted to continue without more direct interference by the police. No one can accuse him of concealment. Mr. Curtis-Bennett seems to have said that happily advertisements such as those which had been referred to before him were now refused by most of the newspapers. The particular newspaper to which reference was made before Mr. Curtis-Bennett as giving publicity to the trade of "Dr. Davis's Famous Pills," "a boon to womankind," was the *People*. In a recent issue of the *People* the advertisement of Davis does not stand alone. We note on another page that of Martin who offers "Ladies' apiol and steel pills, a remedy for all irregularities, superseding bitter apple, pill cochia, pennyroyal, &c." These advertisements appear to us to be tolerably plainly worded and to indicate without much concealment the nature of the goods offered by the advertisers. We dealt, however, with Martin's pills, as well as with those of Davis, in the issue of THE LANCET referred to above and our articles were forwarded to the newspapers which we then named as containing objectionable advertisements. We have always expressed the belief that these advertisements had only disappeared for a time and that they would gradually be seen again, and their reappearance in the *People* confirms our view. Perhaps, however, the attention of its proprietor or proprietors may not have been called to the matter. We are strongly of opinion that it is one worthy of the notice of all newspaper proprietors who are concerned with their personal honour as well as with the honour of the newspaper press.

[1] THE LANCET, Dec. 31st, 1898, p. 1808.

"PURE BEER."

THE "Pure Beer" party were lucky in the ballot on Monday, for Mr. Purvis, the Member for Peterborough, who takes a keen interest in the movement, secured the fourth place. A Bill was accordingly read for the first time on Tuesday dealing with the subject on the lines of the Bill brought in by Sir Cuthbert Quilter in 1886. Recent events have certainly increased the chances of the movement, but we still regard them as very slender.

MEDICAL REPORTS OF THE CHINESE MARITIME CUSTOMS.

THE medical reports of the Chinese Maritime Customs for the half-year ended March 31st, 1900, published in London by Messrs. P. S. King and Son, consist of articles by Dr. O. F. Hall, Chungking; Dr. J. A. Lynch, Chinkiang; Dr. W. H. Park, Soochow; Dr. H. J. Hickin, Ningpo; Dr. H. M. McCandliss, Hoihow and Kiungchow; and Mr. A. S. Deane, Pakhoi. All these gentlemen describe the health of the foreign residents in their respective towns as satisfactory. Dr. Hall says that in Chungking "opium-smoking is very common and many women as well as men are enslaved to the habit. Its effects are bad beyond description, yet vary greatly in different cases." Among some portraits of patients appended to his report is one of a woman who, he says, "is 77 years old and has used opium daily for 47 years; she began for pleasure and has never been sick in any way; she shows no symptoms of debility from opium poison. She has broken off the habit and remains cured." Dr. Park mentions that he had recently used for impacted fæces "an injection of peroxide of hydrogen and the effect was all that could be desired." Dr. Hickin describes a case of malarial colic which lasted from the middle of September, 1899, to the end of January, 1900, and was then speedily removed by a few doses of quinine.

DECREASE OF GENERAL PARALYSIS IN ENGLAND AND WALES

DR. R. S. STEWART of the Glamorgan County Council has furnished an interesting paper in the January number of the *Journal of Mental Science* dealing with the statistical records of the Commissioners in Lunacy with reference to the prevalence of general paralysis. In their fifty-third report the Commissioners conclude that general paralysis is "not increasing among the general population." Dr. Stewart compares the two halves of the decade 1888–97 and tabulates them as follows in order to show the percentages of general paralysis in patients admitted to asylums:—

Years.	Males.	Females.	Total.
1888–92	14·7	3·4	8·9
1893–97	13·1	2·8	7·8

The conclusion is that the diminution in general paralysis affects both males and females. In only one class of society is there an exception to this, and that is the one which provides the private male general paralytic. "The proportion in this class continues to increase, though at a slightly diminishing rate, until now it has arrived at that point that the proportion of private male general paralytics overtops that for male pauper patients. The steady progressive decline of general paralysis among private female patients ..... is continued and unless some material change takes place ..... the disease will apparently be extinct in half a century from the present." All age-periods are not affected

alike in the general decrease which has taken place. The greatest decrease takes place at the age-period of 45–54 years of age, whereas if regard be had to general paralysis in youths and young adults there is an actual increase. Different counties show different results, increase being shown in the industrial and coal-mining counties and decrease in rural districts.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual meeting of subscribers to the British Medical Benevolent Fund was held at 84, Brook-street, W., on Feb. 12th, the President, Sir William Broadbent, Bart., being in the chair. The treasurer's financial statement for 1900 and the report of the committee were presented and they recorded steady and satisfactory progress. In the annuity department the capital has been increased by the purchase of £1600 Paisley Corporation 3 per cent. stock. The income from investments, all of which are in securities authorised by the Trustee Acts, amounted to £2355 13*s.* 3*d.*, of which £2213 6*s.* 8*d.* were paid away in annuities. During the year 16 vacancies were caused by death and they were promptly filled from the reserve list. The annuitants now number 111. In the grant department the subscriptions amounted to £1110 9*s.* 2*d.* and the donations to £773 7*s.* 6*d.* These figures are an increase upon those for 1899 but in the case of the donations the difference is due to two special gifts of 200 guineas and 100 guineas respectively. The grants made amounted to £1549, which sum was distributed to 165 cases in sums varying from £5 to £20. The accounts have been as usual subject to a searching investigation by a chartered accountant who in his report draws attention to the smallness of the working expenses, which were again less than 5 per cent. Hearty votes of thanks were passed to the President and to the treasurer, Dr. S. West, who with the remaining officers were unanimously re-elected. As in former years many distressing and well-recommended cases have had to be passed over in favour of still more urgent ones, and where aid has been given the sum granted has often been miserably inadequate, though all the Fund could afford. The applications reveal a depth of poverty which few can realise and which probably none suspect until the facts are put before them. The committee earnestly and confidently appeal to the profession to make the work of the fund and its claims for increased support more widely known.

THE PROPHYLAXIS OF MALARIA IN THE ITALIAN NAVY.

THE *Annali di Medicina Navale* for January, which, out of sympathy with our great national loss, is published with a black border, contains an important contribution on the Prophylaxis of Malaria by Dr. R. Procaccini of the Italian navy. It is illustrated by five maps and a graphic picture representing a detachment of investigators slumbering peacefully *al fresco* in low iron-strutted hammocks with their heads enveloped in bags and all other parts that are vulnerable to the anopheles and its congeners protected in a similar way. The article in the first place contains a brief but clear account of the present state of our knowledge regarding the nature of malaria and the best means of warding off its assaults. This ground has now been gone over a good many times, but the author's patriotism must excuse him. England and Italy, exclaims the author in his exordium, were the first among the nations to take an interest in the great question, but after a brief interval their good example was followed by Germany, next by France, and finally by Belgium. In the second place Dr. Procaccini relates the history of some experiments which were carried out by an expedition under Government auspices in one of the most malarious districts of the kingdom. The locality selected consisted of the extreme north of Sardinia, together with the islands of Maddalena and Caprera, the last named, it is scarcely necessary to say, having been the home of Garibaldi. The details of the story are full of interest. The expedition was sent out with special reference to prophylactic measures in the naval and military services. Out of 104 men forming the expedition 103 escaped malaria entirely. The 104th man was attacked, but it was ascertained on inquiry that he was in the habit of displacing his protective mask at night in order to smoke. If a mask is a *sine quâ non* a difficulty in this connexion at once arises with sentries, whose vision naturally should be as unobstructed as possible, but who require protection from malaria as much as the rest of the forces of war. Dr. Procaccini observes, "where there's a will there's a way," but the means to overcome this objection will take some finding. Serious difficulty in carrying out prophylactic measures in the services, both in Italy and in other countries, lies in the fact that soldiers and sailors are hardly made to understand the value of hygienic precautions. There is room for hope that as education advances this source of trouble will be eliminated.

THE BIRMINGHAM CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION.

IT will be remembered[1] that the General Medical Council at its last session in November, 1900, had before it the case of Dr. Henry Ward Irvine, the consultant to the Birmingham Consultative Medical and Surgical Institution. The Council came to the conclusion that the charges against Dr. Irvine of advertising were proved, but gave him until May, 1901, to reconsider his position. This action seems to have vexed the committee of the Consultative Institution, and a largely attended meeting was held on Feb. 13th to consider the action of the Council. Mr. Arthur Chamberlain was in the chair. Mr. Councillor Nettlefold rose to propose a motion of confidence in the institution, a motion which had been drafted by the committee. In the course of his speech he remarked that if the institution were not in existence the class of people for whom it was called into existence would have one of three courses open to them. They would have to go to a "street doctor," to the hospitals, or to a consulting physician who would charge very high fees. If Dr. Irvine was struck off the roll of his profession what did it matter to them? He would not be able to sue for fees, but they were business men and they got their fees in advance. He would not be able to sign death certificates, but they did not intend him to kill his patients. After other members had spoken Mr. Arthur Chamberlain addressed the meeting and in the course of his speech said that if the General Medical Council at the meeting in May should think that they were justified in depriving a fellow-practitioner of his means of living, the feeling of that committee would be to appeal to a High Court of Justice. With regard to the admission of persons to the benefits of the institution there should be no tests whatever, and even if all the consultants in the city agreed to make concessions with regard to fees to poor people, it would be wise for working men to have some arrangement of their own. The motion, which ran as follows, was carried with enthusiasm:—

"That this meeting is of opinion that the scheme of the Consultative Medical and Surgical Institution, Birmingham, for providing facilities for obtaining the advice and opinion of properly qualified physicians and surgeons at a fee within the means of people of limited income is of great advantage to the class affected, is calculated to materially reduce the abuse of hospital charity, and as it cannot possibly be an injury to anyone does not justify the opposition and abuse

[1] THE LANCET, Dec. 8th, 1900, p. 1688.

with which it has been met by certain members of the medical profession. This meeting accordingly requests the managers of the movement to proceed with their work and assures them of its continued confidence and support."

The committee is evidently very angry with the General Medical Council and with the Birmingham medical practitioners. Mr. Councillor Nettlefold's remarks are simply silly. He seems to imagine that no patients of a medical man die unless the medical man kills them; and as for his asking "what will it matter if Dr. Irvine is struck off the roll," he will find it will matter a great deal both to the Consultative Institution and to Dr. Irvine, who will be ill-advised to run contrary to the views of the highest tribunal of the medical profession and to the general opinion of his professional brethren. With regard to the advertisement cards which formed the basis of the complaint laid before the General Medical Council, Mr. Councillor Nettlefold, writing to the *Birmingham Daily Mail* of Feb. 15th, says that the committee have done their best to withdraw them. This is as it should be, but the system of the institution is, as we have pointed out previously, the chief matter for condemnation.

TRAFFIC IN CHILDREN.

THE dangers which beset the lives of infants who are made the subject of baby-farming are frequently and forcibly brought home to medical men practising among the poor, and it is useful to them to be aware of the law upon the subject. In one particular they are directly concerned in its enforcement, for under the Infant Life Protection Act of 1897, in the case of the death of an infant in the custody of a baby-farmer working under the Act, the medical man has to decide by withholding or giving his certificate whether an inquest shall or shall not take place. Should he refuse the certificate the coroner has no discretion but to hold the inquest. A case recently brought before a London magistrate, under another portion of the statute referred to, is an illustration of how, although passed with the best intentions, an Act of Parliament may to a great extent be unwieldy and ineffective in practice. A woman named Herbert had received a lump sum of £20 to take charge of an infant until it should be old enough to take care of itself, and had adopted the rather obvious, if dishonest, course of sub-farming the child, presumably for a small weekly sum, to an old woman, in whose custody it was suffering considerably from neglect. The fifth section of the Infant Life Protection Act provides that a person thus taking a lump sum for the bringing up of an infant under two years of age, if it be a sum not exceeding £20, shall give notice to the local authority in order that the future upbringing of the child may be subject to inspection. Herbert had not given this notice and so was summoned under the section referred to. Her first answer was that she had been paid £24 for taking the child, and had she been able to prove this, or indeed that she had taken £20 0*s.* 1*d.*, she would have been safe from the Act, which limits its protection, as we have stated, to children for whose rearing a sum not exceeding £20 is paid. She could not, however, establish this defence and so she was convicted, upon which there followed the question of how she was to be punished. The Act apparently only provides for the forfeiting of the money received in such a case, and Herbert had none of it left so she could not pay forfeit. The magistrate doubted whether, as there was no provision in the Act for this contingency, he could order imprisonment as an alternative for the money payment, and it looked as if there would be no possibility of inflicting any penalty at all. It happened, however, that in obtaining the child Herbert had produced a testimonial to her own merits which she had herself written, and she was charged with obtaining money by false pretences, pleaded guilty, and was sent to prison. This was, no doubt, a desirable termination to the case. But if a woman, who for a time had looked after the child for 5*s.* 6*d.* a week and had grown fond of it, had not informed an inspector of the county council of its removal from her care, and if the inspector had not been active in tracing it, Herbert might have realised a substantial profit on her deal owing to the premature death of the infant. Again, having been detected and her method of doing business exposed, she came near to escaping without punishment, while she was not eventually punished under the Infant Life Protection Act at all. Perhaps those who framed the Act intended that those who trangress it by not giving notice of their transactions under the fifth section of it should be punished by fine or imprisonment, as for an offence under the Act, and should not only be ordered to forfeit the sum received by them. The learned magistrate, however, does not seem to have taken this view, and certainly the section ordering the forfeiture of the money paid does not allude to the imposition of any other punishment as well.

SANITATION AT STEVENAGE.

THE life of a medical officer of health of a small district is not altogether an easy one. In the pursuance of his duties he is almost sure to come into contact with conflicting interests. If he is allowed to be in private practice as well as to hold his post of medical officer of health he not infrequently may be compelled to run counter to his brother practitioners; but perhaps his position is most difficult when he has to point out to the members of the urban or rural sanitary council, whose servant he technically is, sanitary defects in their property. Such a case has arisen at Stevenage, as instanced in the report of Dr. R. A. Dunn, the medical officer of health of the Stevenage Urban District, a report which has been commented upon in an open letter to the ratepayers published in the *Hertfordshire Express* of Feb. 15th. The passage in the report, a copy of which lies before us, to which allusion is made is as follows:—

"On looking through the inspector's journal I notice that he has made upwards of a hundred visits. As a result of these he brought to your notice some 28 pit or pail closets, only a few of which have been done away with; seven cases in which house property was not connected with the sewer; in most of these cases the work has been done, but in two cases, both, I am sorry to say, the property of members of your council, for a very long time our complaints were without avail, although the statutory notices were served. In one of these the work has not even yet been done. Let me point out the extremely bad effect this has in carrying out necessary improvements. Defaulters who are well aware of these and similar cases have more than once said to me: 'If we were only on the council we should not be compelled to do this.' Such a state of affairs brings your authority into contempt and acts as a grave obstacle to any reform."

This is undoubtedly a very grave state of matters and we certainly hope that the ratepayers will see to it in future that only men are elected on the council who will do their duty to their neighbour even if it be to their own hindrance. Dr. Dunn has, we think, put his finger upon the most harmful result which such jobbery on the part of the council brings about—namely, that other defaulters shelter themselves behind the evil deeds of defaulting councillors. Dr. Dunn also points out that his report and that of the sanitary inspector upon house connexions and that upon dairies and milkshops have received practically no attention from the council whatever. Well may he add that "this apparent apathy on the part of the council tends to cause its officers to lose that keenness and interest in their work which it is so important for them to have." We trust that before the next election of councillors those in fault will have seen the error of their ways and that the ratepayers will take

note of Dr. Dunn's remarks. In the meantime we congratulate him upon the stand which he has made for the purity of municipal life.

THE BEER-POISONING EPIDEMIC.

THE medical officer of health of Manchester, Dr. James Niven, has presented a report upon the outbreak of arsenical poisoning, a copy of which we have recently received. It deals exhaustively with the many aspects of the outbreak. Dr. Niven suggests that the recent occurrence does not stand quite alone and that previous mischief in connexion with alcohol has occurred in an epidemic fashion. It is possible that there may have been arsenic present in the beer formerly. There is, indeed, reason to suspect, according to Dr. Niven, that the same phenomena may have been going on for years, though in a slighter degree. This, he adds, would justify some delay in recognising the nature of the disease, since the cases would be regarded as ordinary alcoholic cases of a recognised type, with an unusual proportion of certain striking though not unknown features. We are glad that some stress is made in the report upon the advisability of instituting quantitative analyses. There is a slip in the report on p. 21 where in describing Marsh's test it is stated that the hydrogen evolved is passed through chloride of lime to dry it. Chloride of calcium is, of course, meant, as bleaching powder would most probably destroy arseniuretted hydrogen.

THE COMMUNICABILITY OF GLANDERS.

WE announced last week that the President of the Board of Agriculture has appointed a committee to conduct experimental investigations into the communicability of glanders. An official inquiry into the subject cannot be otherwise than beneficial to practitioners, both medical and veterinary, and particularly to those who make a special study of public health. Glanders is one of the most terrible of all the diseases which can be transmitted from animals to man, and every year instances occur in which human beings become infected from contact with glandered horses. Only a few days ago there was an illustration of this in the Fulham coroner's court, when an inquest was held on the body of a man who had died from the disease. The exact date and source of the infection were not ascertained, as the deceased was an erratic worker, but his occupation was that of a groom or odd man about cab- and omnibus-yards—work that continually brought him into contact with horses and harness. It is well known that glanders exists principally in London, Liverpool, and Glasgow, and that stables belonging to cabmen are those in which the disease is most frequently detected. The conditions under which the majority of cab-horses live are especially favourable for its spread; hygienic arrangements are often almost absent, the horses are crowded together in a totally inadequate amount of cubic space, and the manger is usually a long trough with no divisions in it to keep the food given to one horse apart from that of his fellow. Even if the divisions are provided they are so close that a horse has only to stretch out his neck in order to put his nose into his neighbour's share. As a rule, too, the horses drink out of one tank. This habit cannot be too much condemned; it is even questionable whether the street drinking fountains do not often do more harm than good by disseminating glanderous material. At almost any time of year, but particularly in the summer, nasal mucus can be seen floating on the surface of the water in these drinking troughs and at any time this may be from the nostril of a glandered animal. The stationary tap and bucket system affords much more safety. Since the discovery of mallein the authorities have had on their hands an almost infallible means whereby glanders can be detected. As a diagnostic agent its properties leave nothing to be desired. The committee which has just been appointed will inquire into the influence of this agent to check or cure the disease. Many experiments have been made in Great Britain and abroad to test this question, which was first raised by M. Nocard, but almost the whole of the evidence has gone to prove that as a curative agent mallein is of no value. It is true that many horses will refuse to react when tested again and again, but it is also well known now that glanders is by no means absolutely bound to run a rapid and fatal course in the horse, and cases of recovery without any treatment at all are not uncommon. In making equine post-mortem examinations in London the veterinary practitioner frequently finds old-standing lesions of glanders which have been spontaneously cured, a fact which has been confirmed by microscopical and other tests. Under strict veterinary inspection at regular intervals it would be quite possible to stamp out glanders completely in England. If when a case was reported in a stable the whole of the animals in that stable or stud were subjected to the mallein test and those that reacted were isolated from the healthy there is no reason why they should not do useful work again. It would be necessary to test them again and again and upon the slightest clinical manifestation to insist upon slaughter at once. Many would completely recover. On no account should the animals be sold or lost sight of. The immediate slaughter of all the reacting ones would, of course, settle the case at once and thus end all fear of contagion from them, but the question of compensation would here have to come in and the cost of such a scheme would necessarily be great. Possibly the new committee may be able to bring forward a scheme which will satisfy everybody. At any rate a most valuable report should result, for the names of those appointed upon the committee show that it will include observers who have had unique opportunities for testing their views.

PROTECTIVE INOCULATION AND SERUM-THERAPY.

IN another column we publish a paper read before the North London Medical Society by Dr. F. L. Bunch on the above subject. Although the paper contains nothing very new it forms an admirable *résumé* of our present knowledge on a difficult subject. The majority of practitioners have neither time nor opportunity to study elaborate records of research works and will welcome such a concise presentment of the *status quo* as is given in this paper. Immunity is a condition which has only comparatively recently been investigated. Several theories have been advanced to attempt to explain the forces acting within the body which tend to produce the required resistance to disease. Some of these forces are natural; others are acquired or artificially introduced into the organism. The chief of these theories Dr. Bunch explains and criticises. The methods employed in attenuating cultures are also described. The bitter disappointment to which tuberculin gave rise is commented on, and the attempt to bring about satisfactory protective inoculation in connexion with typhoid fever receives due attention. Here, like other pathologists, Dr. Bunch is forced to conclude that further statistics are necessary before any definite conclusions can be arrived at. To the practitioner the question of cure or arrest of an already developed infectious disease, will probably have the greatest interest. The investigations of Behring, Kitasato, and Sidney Martin in the serum-therapeutics of diphtheria are briefly described. Dr. Bunch lays stress on one point which has hitherto not received the attention it

merits—namely, that antitoxin serum has no reparative action. It cannot regenerate cells which have already undergone katabolic pathological changes, and, further, a certain amount of antitoxin can only neutralise a certain amount of toxin. It follows from this that it is necessary to commence the treatment at the earliest possible moment, when there is a minimum amount of toxin already in the circulation, and we agree with Dr. Bunch that, seeing how innocuous its employment is, a large dose of serum should be given at the earliest possible moment in every case of diphtheria. Some authorities, especially in the United States, recommend that all patients suffering from suspicious sore-throats should receive a full dose of the antitoxin. We do not go quite so far as this, but undoubtedly valuable time is often lost in suspicious cases waiting for a bacteriological diagnosis which may then be only a doubtful one, the toxin meanwhile increasing in the body and the prognosis in a similar ratio becoming more grave.

RINGWORM IN WORKHOUSE SCHOOLS.

THE Metropolitan Asylums Board has made a new departure in the arrangements for the treatment of cases of ringworm under the care of the metropolitan boards of guardians. The Asylums Board has opened at Witham, in Essex, a building which will accommodate 180 children suffering from ringworm. During their stay in the school the children will receive education just as if they were healthy children in an ordinary Poor-law school. The school was opened on Feb. 12th, and Dr. T. Colcott Fox has been appointed to make arrangements for the treatment of the cases. The results of the treatment of ringworm amongst children in workhouses are so unsatisfactory that this new plan deserves to be welcomed, especially as the Metropolitan Asylums Board has appointed a dermatologist to superintend the treatment who has done a great amount of original work on the fungi of ringworm. We understand that this school is merely temporary, but if it proves successful we have no doubt that it will be continued so long as it is needed. That the children under this arrangement do not have to miss their school training is an additional argument in favour of the judicious action of the Metropolitan Asylums Board.

A NEW TEST FOR MASTOIDITIS.

IN the *Journal of the American Medical Association* of Jan. 26th Dr. A. H. Andrews has described a new test for mastoiditis, which is performed by placing a vibrating tuning-fork over the antrum and listening to the sound over the tip of the mastoid with a small belled stethoscope. If the mastoid is filled with pus or granulations, or dense from obliteration of the air-cells, the sound is louder than on the opposite mastoid. Care must be taken not to stretch the skin between the stethoscope and the tuning-fork, for this increases the audibility of the sound. In 40 patients without mastoid symptoms Dr. Andrews has found no perceptible difference between the two sides; in four cases of mastoid disease the sound was louder on the affected side. The following case is an example. A woman, aged 40 years, had had suppurative disease of the left ear with occasional attacks of acute pain for 15 years. During three weeks she had suffered from a dull pain in the ear and mastoid region, which sometimes extended over the side of the head and as far forwards as the eye. The membrana tympani had almost disappeared and the ossicles could not be seen. A cholesteatomatous mass occupied the attic and the upper part of the middle ear. When portions of this mass were removed the surface beneath was found covered with normal granulations. The temperature varied between normal and 101°F. Deep pressure over the mastoid was painful. When the bell of the stethoscope was placed on the tip of the mastoid with the handle of the tuning fork over the antrum the sound was much louder than on the right side: on the left side the fork was heard for 30 seconds, on the right for 16. The usual post-auricular incision was made and the mastoid cortex was found to be of ordinary density. The air-cells were small and filled with granulations. The cavity was cleared of diseased tissue, the posterior wall of the auditory canal and the outer wall of the attic were chiselled away, and the granulations and cholesteatoma were removed from the attic. The facial nerve was found exposed above the fenestra ovalis and sponging the cavity caused spasm of the left eyelid and side of the face. The fork which Dr. Andrews uses for this test is C 512, so constructed that it can be heard by the normal ear for about 35 seconds.

THE BACTERIOLOGY OF YELLOW FEVER.

THE Liverpool School of Tropical Medicine is to be congratulated on the encouragement which it has given to original research, the benefits accruing from which may be of incalculable value to mankind. The work performed by the Malaria Commission is well known, and we now publish an abstract of an interim report on yellow fever by the Yellow Fever Commission of the School. The report bears the names of Dr. Herbert E. Durham and the late Dr. Walter Myers. The completion of the report, of which this is an abstract, was unfortunately interrupted by the onset of attacks of yellow fever in both of the investigators and the lamentable death of Dr. Myers; it was therefore deemed advisable to submit for the time being for publication a shortened report only. Several micro-organisms have been credited with a causal relationship to yellow fever, but none of these has been generally recognised as satisfying all the requirements of a pathogenic organism. Dr. Durham and Dr. Myers describe a fine small bacillus which they found in all the fatal cases of yellow fever which they examined. They consider it probable that this same bacillus has been met with, but not recognised, by three other observers. They likewise consider that it is probable that recognition has not been previously accorded to this bacillus by reason of the reluctance with which it takes up stains and establishes growths in artificial media. These laboratory difficulties, however, were overcome by the two observers. Search was made for parasites of the nature of protozoon, but it was concluded that yellow fever is not due to this class of parasite. The report considers that the evidence in favour of the etiological importance of the fine small bacillus is stronger than any that has yet been adduced for any other "yellow fever germ." The abstract is too brief for us to form any decisive judgment upon the work, but we await the full report of the brave and able investigators with interest.

AS all our readers know, the metropolitan water companies propose to enforce new regulations with regard to water-fittings, and an inquiry has been instituted into the matter by the Local Government Board, who have appointed Mr. Perrin, their water examiner, Dr. Theodore Thomson, one of the medical inspectors, and Mr. E. A. Fawcett, to make a report on the matter. With one aspect of the new regulations we dealt last week. The present time, in our opinion, is not opportune for any alteration in the regulations of the metropolitan water companies. Efficient control over the companies is more strongly indicated than is control over the metropolitan water consumers by the companies. We feel sure that the representatives of the metropolitan boroughs will take this

view at the inquiry, but unfortunately the cost to the ratepayers for the payment of counsel must necessarily be considerable.

SIR WILLIAM MITCHELL BANKS will deliver the Second Hunterian Lecture of the Hunterian Society on Wednesday, Feb. 27th, 8.30 P.M., at the London Institution, Finsbury-circus, E.C. Subject, the Neglect of the Actual Cautery in Surgery and its Value in the Treatment of Pruritus Ani. All members of the medical profession are cordially invited.

SEVERAL important committees of the General Medical Council are summoned to meet next week. The Executive Committee will meet on Monday, Feb. 25th, at 1.30 P.M., and the Penal Cases Committee on the same day at 4 P.M. The Dental Committee will meet on Tuesday, Feb. 26th.

Miss Lillie Emma Vahine é-tua Saville, L.S.A. Lond., M.D. Brux., of the London Mission, has received from the King the decoration of the Royal Red Cross in recognition of services at the International Hospital during the siege of the Legations at Pekin.

A CONFERENCE of representatives of the medical profession and of certain friendly societies has been held at the offices of the British Medical Association. The medical representatives maintained the view that wage-limits should be enforced.

THE lecturers and honorary staff of the Dental Hospital of London have generously contributed a special donation of £2000 towards the building of the new hospital in Leicester-square, which is now nearing completion.

SIR HUGH REEVE BEEVOR, Bart., M.D., F.R.C.P., L.S.A. Lond., has been re-elected the representative of the Society of Apothecaries of London on the General Medical Council for one year from Feb. 6th.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms of the Hôtel Métropole on Friday, March 8th, at 7.30 P.M.

SIR JAMES REID, Bart., K.C.B., Physician to Her late Majesty the Queen, has been appointed a Knight Grand Cross of the Royal Victorian Order.

ABSTRACT OF AN INTERIM REPORT[1] ON YELLOW FEVER, BY THE YELLOW FEVER COMMISSION OF THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

BY HERBERT E. DURHAM, M.B., B.C. CANTAB., F.R.C.S. ENG.,

AND

THE LATE WALTER MYERS, B.SC. LOND., M.B., B.C. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.

1. SUFFICIENT search reveals the presence of a fine small bacillus in the organs of all fatal cases of yellow fever. We have found it in each of the 14 cadavers examined for the purpose. In diameter the bacillus somewhat recalls that of the influenza bacillus; seen in the tissues it is about 4 μ in length.

2. This bacillus has been found in kidney, in spleen, in mesenteric, portal, and axillary[2] lymphatic glands, &c., taken from yellow fever cadavers directly after death. In the contents of the lower intestine apparently the same bacillus is found often in extraordinary preponderance over other micro-organisms. Preparations of the pieces of "mucus," which are usually, if not always, present in yellow fever stools, at times may almost present the appearance of "pure culture."

3. Preparations of the organs usually fail to show the presence of any other bacteria, the absence of which is confirmed by the usual sterility of cultivation experiments.

4. It is probable that this same bacillus has been met with, but not recognised, by three other observers. Dr. Sternberg[3] has mentioned it; and he has also recorded the finding of similar organisms in material derived from Dr. Domingos Freire and Dr. Carmona y Valle, but he did not recognise its presence frequently, probably on account of the employment of insufficiently stringent staining technique.

5. It is probable that recognition has not been previously accorded to this bacillus by reason of the difficulty with which it takes up stains (especially methylene blue) and by reason of the difficulty of establishing growths on artificial media.

6. The most successful staining reagent is carbolic fuchsin solution (Ziehl) diluted with 5 per cent. phenol solution (to prevent accidental contamination during the long staining period), immersion for several hours, followed by differentiation in weak acetic acid. Two hours' staining period may fail to reveal bacilli which appear after from 12 to 18 hours. The bacilli in the stools are often of greater length than are those in the tissues and they may stain rather more easily; naturally the same is true of cultures.

7. Since the bacilli are small and comparatively few in numbers they are difficult to find. To facilitate matters at our last two necropsies (the fourteenth and fifteenth) a method of sedimentation has been adopted. A considerable quantity of organ juice is emulsified with antiseptic solutions, minute precautions against contamination and for control being taken; the emulsion is shaken from time to time and allowed to settle. The method is successful and may form a steady means of preserving bacteria containing material for future study. The best fluid for the purpose has yet to be worked out; hitherto normal saline with about ½ per cent. sublimate has been employed.

8. Pure growths of these bacilli are not obtained in ordinary aerobic and anaerobic culture tubes.

9. Some pure cultures have been obtained by placing whole mesenteric glands (cut out by means of the thermo-cautery) into broth under strict hydrogen atmosphere. Investigations into the necessary constitution of culture media for successful cultivation is in progress.

10. Much search was made for parasites of the nature of protozoa. We conclude that yellow fever is not due to this class of parasite. Our examinations were made on very fresh organ juice blood, &c., taken at various stages of the disease, with and without centrifugalisation[4] and on specimens fixed and stained in appropriate ways. We may add that we have sometimes examined the organs in a fresh state under the microscope within half an hour after death.

11. The endeavour to prove a man-to-man transference of yellow fever by means of a particular kind of gnat by the recent American Commission is hardly intelligible for bacillary disease. Moreover, it does not seem to be borne out by their experiments, nor does it appear to satisfy certain endemiological conditions. It is proposed to deal more fully with the endemiology and epidemiology of the disease on a later occasion.

12. We think that the evidence in favour of the etiological importance of the fine small bacillus is stronger than any that has yet been adduced for any other pretended "yellow fever germ." At the same time there is a much further work to be done ere its final establishment can be claimed. The acquisition of a new intestinal bacterium would explain the immunity of the "acclimatised."

Para, Brazil.

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[1] The completion of the interim report of which this is an abstract was interrupted by the onset of attacks of yellow fever in both of us. The loss of my much lamented colleague renders it advisable to submit this shortened report only, for the time being.

[2] We find these constantly enlarged and much injected, though whether this is specific we are not able to say.

[3] Report on Etiology and Prevention of Yellow Fever, 1890.

[4] We have found this sometimes useful in examining the blood of ague patients.

THE ROYAL COMMISSION ON SOUTH AFRICAN HOSPITALS.

I.

WE have already in our issue of Feb. 2nd, p. 349, given a brief *résumé* of the report of the Commissioners and we now proceed to consider the report in detail. Passing over Part I. of the Report, which contains a brief account of the proceedings by which the Commissioners were enabled to discharge their duties, together with some observations upon the evidence and the work done, we come to Part II., which deals with particulars of complaints made as to the treatment of the sick and wounded and certain conclusions arrived at by the Commissioners of a general character. Firstly comes the question of

THE INSUFFICIENCY OF THE ROYAL ARMY MEDICAL CORPS.

The Commissioners say:—

The military and medical authorities certainly never anticipated when this war became probable that it would be of the magnitude it has since attained. The Royal Army Medical Corps was wholly insufficient in staff and equipment for such a war, and it was not so constituted as to have means provided by which its staff could be very materially enlarged, or its deficiencies promptly made good. These deficiencies were felt throughout the South African campaign, as will more clearly appear when we deal in detail (in Part III.) with the complaints which have been made in respect of the care of the sick and wounded.

The deficiency in the staff of the Royal Army Medical Corps before this war was not the fault of the Director-General and the staff of officers associated with him. They had for a considerable time before the outbreak urged upon the military authorities the necessity for an increase of the corps, but for the most part without avail.

The Commissioners proceed to give an account of "unit allowances," or the ordinary provisions for the care of the sick and wounded of an army on active service at the front:—

One medical officer is allotted to each regiment and to each brigade of artillery. He accompanies his regiment and carries with him on service his medicines and medical and surgical appliances. These regimental medical officers are not now, as was once the case, attached in times of peace to particular regiments; the result being that when war commences the medical officers are not personally acquainted with the men of the regiments to which they are attached. The question whether this ought to be remedied to any extent, and if so in what manner, should, we think, be made one of the subjects of inquiry when this war is ended.

In mentioning field hospitals they say that numerous complaints arose from the fact that under certain circumstances field hospitals had to be largely used as fixed hospitals. The ambulance wagons supplied to the bearer companies are, in the opinion of the Commissioners, heavy, jolty, and uncomfortable. The type in use, they think, could be and should be improved.

STATIONARY AND GENERAL HOSPITALS.

With regard to these hospitals the Commissioners point out that the type of marquee in use should be improved. This, they say, is a matter for military experts. The Commissioners also note that as fixed hospitals are not generally furnished with their own transport delay often occurs in removing patients from railway or other stations to the hospital. They consider that the use of bearer ambulances should be largely extended.

NURSES.

As to nurses, by which term is meant female nurses, the Commissioners consider that their use should be largely extended and that they certainly ought to be employed for enteric and other fever patients. The objection taken to the employment of local nurses was not well founded.

DEFICIENCY IN THE STAFF AND EQUIPMENT OF THE ROYAL ARMY MEDICAL CORPS.

With regard to this most important point the Commissioners say,

At the outbreak of the war there were only available staff and equipment for two army corps. An army corps is (approximately) composed of three infantry divisions of 10,000 men each, and 6000 corps troops (cavalry, artillery, engineers, &c.). Even the two army corps which were first employed in the war could only be staffed and equipped with difficulty, as it appears from the evidence of Major Bedford that for the 6th Division the reservists had to be used, and a mixed *personnel* employed. It further appears from the evidence before us that, after providing for the first two army corps, there was existing only a reserve of equipment sufficient to furnish one general hospital and two stationary hospitals. The explanation given for so small a reserve of equipment being kept is, that improvements were being so often made in various articles that it was undesirable to keep a large stock of what might ultimately prove to be out of date and useless. Although this explanation has some force in it, it does not appear wholly satisfactory. With regard to staff, the evidence given by Surgeon-General Jameson, the Director-General of the Army Medical Service, shows that the strength of the Royal Army Medical Corps both in officers and men was completely exhausted in providing the medical attendants for the first two army corps in South Africa, and the general and stationary hospitals which were required in connexion with those two corps. During the year 1900, and especially during the first four months, further troops were rapidly poured into South Africa, and it consequently became necessary for the Director-General at home and the Surgeon-General at the Cape to make provision for the medical service for these troops. The colonial troops, the militia, and the volunteers brought with them only their regimental medical officers, and the whole burden of supplying them with field and base hospitals fell upon the Imperial Government. The only exceptions being, that the Imperial Yeomanry were to a certain extent separately provided with a base hospital, which was stationed at Deelfontein, and subsequently with a branch hospital, which was stationed at Pretoria; and that the New South Wales contingent brought with it the half of an ambulance company which was subsequently, at Surgeon-General Wilson's request, doubled.

The Commissioners then describe how the deficiencies were met.

Having regard to the deficiencies and circumstances above mentioned the difficulties of supplying the army in South Africa with sufficient medical aid became very great, increased as those difficulties were by the enormous range over which the military operations were carried on, and the great length of the lines of communication. As the war progressed and losses occurred in the medical staff, much difficulty was experienced in providing an adequate staff of doctors and orderlies in South Africa. To a great extent this was met by the employment of civil surgeons and untrained orderlies. But the pressure was so great that a special reduction had also to be made in the unit allowances of the field hospitals at the seat of war. The original divisions which came from Great Britain arrived with the proper allowance of these hospitals. But the 9th and 11th divisions were formed in South Africa, and though it was found possible to supply locally these divisions with bearer companies, it was not found possible to supply them with field hospitals. The field hospitals were only supplied by taking away from each of the other divisions its divisional field hospital, and also (though this is not quite so clear on the evidence) the extra field hospital which, as previously stated, is by allowance allotted to each army corps. In other ways the army corps unit allowance of field hospitals was reduced from nine or 10 to six. Major Bedford states that owing to this the field hospitals in South Africa were 10 short of the proper number. This shortage was never made up, and undoubtedly caused a strain throughout the whole of the campaign. While willing to make every allowance for the many difficulties which the medical authorities in South Africa had to contend with in supplying the locally-constituted divisions with field hospitals, it seems strange that when it became evident that it would be necessary to abstract field hospitals from units already organised a demand was not made by the Surgeon-General in South Africa upon the War Office to fill up the blanks that were thus left. There is no evidence to show that this was done. At the same time we have to acknowledge that a field hospital to be efficiently worked must be staffed by a sufficient proportion of trained officers and trained orderlies of the Royal Army Medical Corps. It is only some posts in these hospitals which can be satisfactorily filled by civil surgeons, and at the time we are now dealing with it was very doubtful if a sufficient number of officers was available for the purpose of giving to the *personnel* of the 10 field hospitals required the necessary proportion of Royal Army Medical Corps men. Certainly it does not appear to have been practicable to obtain in sufficient quantities a supply of trained orderlies.

The great need of staff of the Royal Army Medical Corps is exemplified by the fact that when No. 5 General Hospital arrived in South Africa on Jan. 20th, 1900, its *personnel* had to be severed from its equipment and used for the hospitals at the front; its equipment was temporarily stored at Woodstock and was subsequently used for other hospitals. Fortunately, the supply of civil surgeons in the United Kingdom willing to help in the campaign was abundant and, as a rule, of excellent quality, but of necessity some time elapsed before these civil surgeons could be obtained and forwarded to the seat of war. Surgeon-General Wilson in South Africa also enlisted there the services of local practitioners, but the supply of these was very limited. In forming fresh hospitals and utilising these surgeons it was found essential to have a certain number of doctors of the Royal Army Medical Corps in each hospital and an army doctor at the head. The reason for this could not be better stated than in the words of Mr. Bowlby, senior surgeon in charge of the Portland Hospital:—"It is, however, a great mistake to suppose that civilian surgeons, however skilful, can satisfactorily supplant the army surgeons beyond certain limits, and it is certainly my opinion that this limit has been passed a long time ago. Some of the more recently formed general hospitals have had only three or four Royal Army Medical Corps officers for the organisation of the whole 500 beds, or, as at Bloemfontein, 1500 or more; and, as a result, matters have not worked as well as they might. It must be remembered that a young surgeon with civilian training, however brilliant, cannot know anything about such matters as camp sanitation, the duties of ward-masters or stewards, disinfection of clothes and stools, pitching of camps, inspection of food, what orderlies know and can do, and what orderlies do not know and cannot do, and a hundred other things which every physician and surgeon would think of. I am quite certain that the working of these hospitals was made still more difficult by the deficiency in numbers of officers of the Royal Army Medical Corps, and it is my opinion that in all departments of the Royal Army Medical Corps there has been very great personal strain because the work has had to be done with a staff insufficient in numbers."

The difficulty of supplying orderlies accustomed to or fit for hospital work was much greater than the difficulty of finding civil surgeons, and in fact was never overcome. Surgeon-General Wilson in his evidence put the position tersely, though perhaps too strongly, when he said that he was obliged to take all who offered themselves. A good

orderly must be trained, and the training takes some time and clearly ought not to be obtained at the expense of patients in a crowded hospital. Some orderlies were obtained from the St. John's Ambulance Association These men, though as a body they worked well, were to a great extent untrained and quite unused to hospital work, and some of them appear to have been rough and unfitted for the purpose of tending sick men. Ordinary regimental privates were also largely employed. Some of these privates were soldiers who, though not fit for duty at the front, were able to be about and look after others, and others were convalescents, sufficiently recovered from their illnesses to be able to do nursing duties in the hospitals. There is much difference of opinion in the evidence before us as to whether convalescents should be employed at all for hospital purposes. We see no objection in times of great pressure, when trained orderlies cannot be obtained, in convalescents being employed to assist in hospital work, provided that the convalescents be carefully selected and are found to be in a state of health which renders them able to assist in the work without injury to themselves. But, undoubtedly, they should be used sparingly and only as assistants where there are trained orderlies sufficient and able to properly supervise them. Surgeon-General Wilson, in a circular addressed to the medical officers of the hospitals in South Africa, pointed out the advisability of their employing, when necessary, as assistant orderlies, men who were fit for garrison duty rather than convalescents from fever or other serious disease. But convalescents have been employed in this war at times of pressure. We find cases where it is suggested that men employed as orderlies were not perfectly convalescent or fit to act. It is difficult to say how far this suggestion is well founded. Possibly there may have been cases of the kind, but we have no sufficient reason for thinking that they were at all numerous.

The general work done by the authorities in providing a supply of doctors and orderlies as the war went on appears from the following figures which may be taken to be approximately accurate, though owing to the colonial levies and the temporary employment of local medical men, precise figures are not available.

In the early part of October, 1899, there were in South Africa about 20 000 British troops. By the end of October a further 14,000 men had arrived. During the following six months to April, 1900, reinforcements were poured into the country at the average rate of about 30,000 men a month. During May, June, and July, the reinforcements amounted to about 11,000 men a month. The total number of troops landed between September, 1899, and July, 1900, did not fall short of the aggregate of 230,000 men. At the beginning of September there were in the country about 30 medical officers and 270 hospital subordinates. During September and October, 1899, about 50 medical officers, 1000 hospital subordinates, and 12 nurses arrived, and during the following six months about 600 medical officers (including civil surgeons), 5000 hospital subordinates, and 275 nurses were landed. In all there were landed in South Africa during the period from September to July about 900 medical officers (including civil surgeons), 400 nurses, and 6000 non-commissioned officers and men of the Royal Army Medical Corps and St. John's Ambulance Brigade. At the time of the greatest pressure, which occurred at the end of the month of March, the total force then engaged being about 207,000 men, there were about 800 medical officers (including civil surgeons), 6000 hospital subordinates, and 800 nurses in the country. In July there were remaining available for duty about 224,000 men in the army and the medical staff consisted of about 1000 medical officers (including civil surgeons), 7000 hospital subordinates, and 900 nurses. It must be remembered that although these figures fairly represent the amount of medical aid available in the country generally it does not follow that it was distributed in proportion to the needs of particular localities. The movements of troops were often rapid and unexpected. Transport was generally difficult and had in many cases to be utilised more with a view of supplying the necessities of the fighting line than for the purpose of rendering medical aid, which was therefore often lacking to a more or less extent. These difficulties were very conspicuous at Bloemfontein during the months of April and May, but existed to a less extent at other places and on other occasions.

With regard to the nurses, there was no difficulty found in obtaining a sufficient number of suitable persons, nearly all of whom were properly trained.

With reference to the dispatch of general and stationary hospitals and their equipment of medical and surgical stores, necessaries, and hospital comforts, we consider that from the time the true position of affairs was realised the home authorities did all that was practically possible in procuring and forwarding them to South Africa.

Details as to the hospitals sent out from this country to South Africa and the dates of their arrival there appear in the Appendix (*vide* Appendix—*Bedford* 2), which also contains a statement showing at various dates between the 2nd October, 1899, and the 16th July, 1900, the strength of the Army in South Africa and the corresponding strength at those times of the medical *personnel* (*vide* Appendix—*Jameson* 4).

Speaking generally, we may say that all requisitions from South Africa concerning the care of the sick and wounded there were promptly met by the home authorities, and that no delay occurred here in meeting those requisitions, excepting in forwarding a few things, such for example as ambulance wagons and marquees and some special articles not usually kept in store, and which could not be purchased or obtained quickly.

The efforts of the home authorities were ably supported by the authorities at the base in South Africa, who worked well in procuring local supplies and in forwarding what was required to the front. In these ways there were soon established in South Africa ample supplies of all necessaries and medical comforts, but owing to the difficulties of transport and the large extent of country to which they had to be supplied, it was often found impossible, especially in the case of the advance of the army of Lord Roberts to Bloemfontein and Pretoria, to get necessaries or comforts which existed in sufficient quantities in South Africa, to the exact spot where, or at the exact time when, they were urgently needed. And, accordingly, at certain places and times, there was a want of certain articles required for the sick and wounded. These will be found more particularly dealt with by us in Part III. The only general remark that we need make here is, that throughout the campaign (until quite recently) there was a deficiency of bed-pans and commodes, the lack of which often caused considerable discomfort and even suffering on the part of patients. The great necessity for such articles, especially in a country like South Africa where dysentery and enteric fever are rife, appears not to have been adequately recognised by the medical authorities and was certainly not sufficiently provided for.

Various complaints, often of a sweeping character, have been made on various grounds against the Royal Army Medical Corps in this war. Like every large body of men, the Royal Army Medical Corps has its unfit or bad members, but the evidence justifies us in saying that in this war the proportion of such members to the whole body of the Royal Army Medical Corps is very small. Speaking of the officers as a whole, their conduct and capacity deserve great praise. Their devotion to their duties both at the front and in the fixed hospitals, and the unselfish way in which they have attended to the sick and wounded, often at the risk of life, have been recognised by all impartial witnesses. The number of those who have died during this war in discharge of their duty is unfortunately large.

There were, of course, a few exceptions to the general efficiency, and cases of roughness and inattention to the wants of patients on the part of a few officers will be found referred to when we deal in detail with complaints in Part III. Such few cases naturally led to mischievous results and gave rise to much complaint, and patients who thereby suffered, or persons who saw the suffering, were sometimes apt (perhaps not unnaturally) to judge the Royal Army Medical Corps as a body by those cases, and to make general charges against it.

* * * * * *

But in connexion with the subject of the general efficiency of officers of the Royal Army Medical Corps we must refer to a fact which ought not to be ignored, either in the interests of the Royal Army Medical Corps itself or of the army generally, and that is the existence on the part of many military officers of a feeling of distrust of the skill and professional experience of doctors of the Royal Army Medical Corps as compared with civil doctors. To a great extent we believe this mistrust to be ill-founded. That it is not wholly unfounded is to be explained by the difficulties under which the officers of the Royal Army Medical Corps have hitherto laboured.

COMPLAINTS CONCERNING OFFICERS OF THE ROYAL ARMY MEDICAL CORPS.

As regards this question the Report states:

The Royal Army Medical Corps has been undermanned even in times of peace and its staff much overworked. In consequence the majority of the officers have had no sufficient holidays or leave of absence, and no proper opportunities of studying or of keeping abreast with recent advances in the practice of medicine and surgery. The authorities have experienced, probably to some extent in consequence of the above facts, a difficulty in obtaining men of good professional standing to join the Royal Army Medical Corps, and the insufficiency of officers has occasionally led in the present war to men of the Royal Army Medical Corps being employed who were not properly fit for the due discharge of the duties cast upon them. Some few officers who had retired, or practically retired, and who were not fitted for active work, have been employed. Some of these, being senior men, were put in charge of important hospitals; for in the Royal Army Medical Corps the practice of appointing men to the more important posts according to mere seniority appears to be too rigidly adhered to. The result of such appointments has been that the hospitals to which they were appointed as chiefs have not been properly organised or superintended, and the hospitals have suffered in consequence. It should be clearly understood that these exceptional instances were but two or three in number.

We think that steps should be taken immediately after this war is ended, or at some other suitable time, whereby (1) the staff of the Royal Army Medical Corps may be permanently enlarged, and due provision may be made for its further necessary and speedy enlargement in times of great wars; (2) inducements may be offered to ensure a continuous supply to the corps of sufficient men of good professional attainment; and (3) the men who have joined may be kept as a body thoroughly acquainted with the general progress made in professional subjects and at a high professional standard of efficiency.

The means by which the above results can be best attained require careful expert investigation and consideration and cannot be adequately dealt with by us. They should form the principal subject for consideration on the part of the departmental or other committee whose constitution is recommended by us at the end of this report.

As regards the complaints that the officers of the Royal Army Medical Corps are too military in their habits and conduct the Commissioners observe that it must be remembered that all their patients are soldiers, but they go on to say:—

We think that occasionally the military tone of the hospitals has been hard on the ordinary private soldier who is really ill and might well expect when in hospital to be treated very much as a patient would in an ordinary civil hospital. And no doubt the fact that, even while in hospital, he has to regard his doctor as his superior officer has tended to increase his dislike of making complaints even when they might be well founded. We think that this should be remedied, as could easily be done if the views we are expressing were brought to the attention of the officers of the Royal Army Medical Corps and were duly appreciated by them, as no doubt they would be.

As certain attacks have been made against the principal medical officer and head medical staff in South Africa for want of organising powers, and generally for the way in which the campaign in South Africa has been managed from a medical point of view, we must state our views upon this matter.

* * * * * *

In South Africa the territory occupied by the troops is vast. In this territory numerous armies or bodies of men have been continuously and rapidly changing their positions. Often the army movements have been extremely sudden and no notice of them could be given beforehand to the medical staff. The medical arrangements for all these armies and troops had to be considered and provided for. In addition the medical staff had to consider and provide for the placing and shifting of the various hospitals on the lines of communication and the establishment of the hospitals at the base and the supply and care and transport of all the numerous requisites for sick and wounded men throughout the country occupied by our soldiers.

Of course, judging from events, we know that mistakes have been

made by the staff in the course of this war and that things have not been foreseen which might have been. We have pointed out in dealing with complaints in Part III. instances of such mistakes and oversights. But taking their work as a whole and considering the difficulties they have had to contend with we think that the principal medical officer and his head staff have done excellent work. They have never spared themselves and have shown a great devotion to their duty and every desire to make due provision for the care of the sick and wounded, and when their conduct is fairly judged we think that they deserve great praise. The organisation of the field and stationary and base hospitals for the colonial troops, the militia, and volunteers fell upon the medical staff in South Africa, and in our judgment they met the difficulties presented to them with singular ability and success.

CIVIL SURGEONS: COMPLAINTS AGAINST ORDERLIES.

The Commissioners find that the work of the civil surgeons was, as a whole, well done, and as for the orderlies the way in which these men as a body discharged their duties has deservedly been the subject of high praise from many witnesses of experience. Some of the untrained orderlies who had to be hastily obtained to supply deficiencies were inattentive, rough, and occasionally brutal to patients. But these men were not the trained orderlies of the Royal Army Medical Corps. The report proceeds:—

There are two other matters of importance to be mentioned. We refer to the existence in places amongst the orderlies of the crime of stealing the stimulants and comforts—and even the money and other property—of patients, and also of the practice of taking bribes from the patients for the supply of comforts or for rendering the assistance due to them. There have been too many complaints on these heads brought to our notice for us to consider the cases in which the ill-practices in question have occurred as so exceptional as not to demand serious consideration, though we have no sufficient reason to justify us in concluding that they prevailed to any very large extent. The medical officers do not appear to have been sufficiently aware of their existence. This is to be regretted, for otherwise steps no doubt would have been taken to remedy the evils in question. We think it advisable that the attention of the medical officers of the various hospitals should be specially and speedily called to these matters, with a view to their instituting searching inquiry and stamping out the ill-practices so far as they exist in their hospitals.

PRIVATE HOSPITALS AND CHARITABLE SOCIETIES.

The various private hospitals did excellent work, as well as the Red Cross Society and sundry charitable persons.

But there must have been some waste owing to the overlapping of the various charities and charitable gifts, and to the difficulty of properly distributing the same amongst those who needed them. In future wars it would be advisable, if possible, that some provision should be made by which all charitable gifts should be received and dealt with by one organised body.

RAILWAY TRANSPORT.

Considering that the railways were, as a rule, only single line, of a small gauge, and had only a small rolling-stock, the difficulties of transport were overcome in a most creditable manner.

ADMINISTRATIVE DUTIES OF THE ROYAL ARMY MEDICAL CORPS AND "RED TAPE."

The Commissioners do not think that the administrative duties of the Royal Army Medical Corps could be lightened by the employment of civil administrators, and with regard to "Red Tape" the Commissioners state:—

We believe, shortly speaking, that what is meant from a practical point of view by the use of the term as applied to the Royal Army Medical Corps is: (1) that there are numerous unnecessary returns and records to be filled up and kept by the principal medical officer; and (2) that difficulties and delays ensue from the necessity cast upon the officers of hospitals by the military regulations in respect of the requisitioning of necessaries.

With regard to the first point, no doubt the returns and other documents are numerous. To a certain extent they cannot be avoided. For instance, records of admissions to the hospital, and discharges from it, and also of complaints of the patients, must be kept.

So long as the medical officers are expected and required to answer promptly all inquiries concerning wounded or sick soldiers, the necessity for several full returns and records being kept must be admitted. We do not ourselves feel justified in attempting to point out what returns or records could in time of war be dispensed with; except that in the case of general hospitals we cannot see the necessity for three records being kept, as is ordinarily the case—namely, one by the principal medical officer of the surgical division, one by the principal medical officer of the medical division, and the third by the chief principal medical officer of the hospital. It is possible, however, that the documents might properly be shortened in several respects, and the question as to how this could be effected might also usefully form one of the subjects to be inquired into by the Committee we have already mentioned. We should, perhaps, add that in this campaign civil surgeons were, as a rule, only required to fill up the diet sheets, which, in our opinion, of necessity should be kept by them. As to a complaint that has been made against the classification of diseases in the returns we cannot think that this is well founded. The classification in question is that of the Royal College of Physicians, the Royal College of Surgeons, and is that adopted by the Registrar-General of Mortality in England.

With regard to the second point, it is true that the medical officers have to get supplies for their hospitals, including medical comforts, from the Army Service Corps, and such things as beds, mattresses, &c., from the Ordnance officers. This no doubt does on some occasions cause delay. Whether this can to any and what extent be avoided with practical advantage by permitting the Royal Army Medical Corps to have sole possession of and control over all hospital necessaries (other than ordinary food and ordinary clothing), including such things as beds, mattresses, and hospital clothing, is a question which should be considered by the Committee which we have already mentioned.

Except in respect of special drugs or medical comforts not ordinarily used, and in cases of urgency, the hospital should and in ordinary cases would be properly provided with all requisites, and the medical officers in charge as they fell short of any requisite would requisition for a supply in time, and we believe that apart from special cases those requisitions would be complied with without any unreasonable delay. But in cases of special medicines or instruments, or in cases of urgency, undoubtedly there might be delay, and the difficulty could only be met by giving the medical officers in command of the hospitals full power to order and buy on their own responsibility at the expense of the State. Naturally, such a power is one liable to be abused, and ought to be exercised with great care, but there certainly should be such a power given to the officers, and it should be freely used without liability on their part to censure, except in case of abuse.

As a matter of fact, in this war such a power has been exercised to a large extent by many of the medical officers. There is a General Regulation of the Royal Army Medical Corps which points in this direction, but it is limited in scope and not quite explicit enough. Some of the medical officers in South Africa apparently did not know that they had this power, and accordingly did not exercise it.

In Natal Colonel Gallwey expressly issued a circular which dealt with the buying by officers in cases of necessity, and that notice was very efficacious and was promptly acted upon by the medical officers there. In others parts of South Africa an express circular of the kind was not issued, and it would have been better if it had been. Surgeon-General Wilson did send a circular pointing out generally that medical officers in cases of emergency should take the initiative in procuring what was necessary, and stated that he would support them in their acts, but he did not specially refer to the question of buying. It appears from his evidence, however, that he did speak to the principal medical officers on the subject, and told them to exercise the power of buying freely.

TRANSPORT OF THE ROYAL ARMY MEDICAL CORPS.

With regard to the suggestion of the Royal Army Medical Corps having its own transport, the Commissioners consider that there are difficulties in the way of this suggestion being carried out. But they think that general and stationary hospitals should have their own transport which should not be taken away from them.

SANITATION.

In an ordinary hospital the Commissioners consider that the principal medical officer should look after its sanitation.

But when there is a question of the sanitation of a town, or of a large camp, where hospitals exist, we think it is advisable that there should be a special sanitary officer who should be charged with the various larger duties appertaining to sanitation, such as the location of proper camping grounds for the various regiments, fixing sites for hospitals, providing suitable sites for hospitals for sick horses, making arrangements for the removal of refuse and the discharge of the latrines of the hospitals, and so forth. Occasionally in this war special sanitary officers have been appointed in large centres, as, for example in Bloemfontein and in Pretoria, cases which are specially referred to in Part III. But difficulty has been experienced in finding suitable men for such posts. We think that it is preferable that the men to be appointed should be officers of the Royal Army Medical Corps, and that it is advisable, in order that duly qualified special sanitary officers should be forthcoming in future wars when required, that, as part of the organisation and working of the Royal Army Medical Corps, certain members of that body should be specially selected to undertake sanitary duties.

(To be continued.)

THE WAR IN SOUTH AFRICA.

SOUTH AFRICA has been the graveyard of many reputations and the war has given rise to no end of contentious criticism. The public can now read the South African despatches covering the whole period and giving in effect a historical and, in a sense, official outline of the events of the campaign. The study of them is of general interest and does not concern military readers only. They serve to clear up many points which unquestionably needed explanation and to set forth the nature and difficulties of an expedition which has so severely strained and tested, not only the medical, but every branch of the service. The medical service had, of course in common with the rest of the army, to take its full share of those difficulties which were brought about by the exceptional nature of the campaign and the untoward occurrences which arose in the course of it. How far, however, these could and should have been foreseen or guarded against and provided for by timely and adequate hospital arrangements is a question which is bound to be threshed out in Parliament during the present session.

Cases of plague still continue to make their appearance at Cape Town, but the disease has not happily shown any signs of rapid extension. The cases have been few

so far and the disease is stated to be of a much less severe type than that which prevailed in Bombay, but the local authorities fear that some cases are being concealed. Be this as it may, the outbreak is very embarrassing in that it seriously interferes with the employment of native labourers and with the work at the Cape Town docks, in addition to causing a certain amount of anxiety inseparable from the mere fact of its presence.

The war news from South Africa is, on the whole, satisfactory. There is great activity on the part of the British in pursuit of the Boer forces. The sweeping method adopted by Lord Kitchener's policy is being systematically pursued. The object is apparently, as we have said, to drive the Boers into certain positions and localities where, deprived of cattle, horses, forage, ammunition, and supplies generally, they will have to fight in order to live, instead of, as has been hitherto the case, living in order to fight. It appears at the moment of writing that both Botha's and De Wet's forces are in tighter situations than they have hitherto been. Those of the British and colonial troops who have been for a long time in the field are all more or less fatigued and getting what is termed stale. We may feel confident of their determination, however, to spare no effort to bring the war to an end. All this desultory fighting in various directions on a small scale adds to the number of wounded who are admitted to the surgical side of hospitals, but it is on the medical side and chiefly from enteric fever and other forms of disease that the sick lists are maintained.

"RETURN" CASES OF SCARLET FEVER AND DIPHTHERIA.

IN February, 1900, the Metropolitan Asylums Board asked the Royal College of Physicians of London for an expression of opinion as to certain cases of scarlet fever and diphtheria which had been discharged from the Board's hospitals as recovered but had nevertheless been alleged to prove sources of infection on returning home.[1] The reply of the College was considered by the Board at its meeting held on Feb. 2nd; it contained the three following recommendations, which the medical superintendents of the Board's hospitals have been authorised to carry into effect:—

1. That in each hospital a couple of wards identical in respect to cubic space per bed, &c., should be set aside and administered on a different principle, the sex of the children being the same, and the age as far as possible; that in one ward the cases subject to mucous discharges from nose or ear be rigorously excluded; that immediately on the appearance of any such discharge the patient should be removed, and that all nozzles of syringes should be kept in antiseptic solutions. In the other ward no special attention should be paid to these discharges other than that hitherto adopted. The incidence of either rhinorrhœa or otorrhœa should be compared. Cases of "septic scarlet fever" should be excluded from both.

2. That, if possible, in certain hospitals, with the approval of the medical superintendent, two or more rooms previously disinfected be reserved for the isolation after six or eight weeks' detention of single patients who are suffering from rhinorrhœa or otorrhœa, but whose desquamation is completed. Each patient so secluded should be kept for 10 days or a fortnight before returning home. During this period of detention the affected parts should be regularly irrigated or syringed with some reliable antiseptic, and great care should be taken that the nozzle of the apparatus be kept in a germicidal solution. On the expiration of the quarantine the patient should be sent home whether the discharge has ceased or not, and the room should be disinfected prior to the reception of another patient. The subsequent history of the case should be investigated.

3. That the inquiry into the facts connected with the incidence of the return cases at the managers' hospitals should be continued for a period of 12 months, and that the scope of the inquiry should include the history of the cases discharged under the conditions mentioned.

[1] THE LANCET, April 21st, 1900, p. 1162.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6853 births and 4408 deaths were registered during the week ending Feb. 16th. The annual rate of mortality in these towns, which had been 16·4 and 19·6 per 1000 in the two preceding weeks, declined again last week to 19·5. In London the death-rate was 19·3 per 1000, while it averaged 19·6 in the 32 provincial towns. The lowest death-rates in these towns were 11·7 in Burnley, 13·3 in Bradford and in Huddersfield, 13·9 in Cardiff, and 14·3 in Preston; the highest rates were 22·7 in Birkenhead, 22·8 in Birmingham, 25·1 in Plymouth, 27·3 in Norwich, and 28·8 in Liverpool. The 4408 deaths in these towns included 348 which were referred to the principal zymotic diseases, against 323 and 397 in the two preceding weeks; of these 105 resulted from whooping-cough, 78 from measles, 71 from diphtheria, 35 from diarrhœal diseases, 32 from "fever" (principally enteric), and 27 from scarlet fever. No death from any of these diseases occurred in Huddersfield; in the other towns they caused the lowest death-rates in Croydon, Norwich, Bradford, and Newcastle, and the highest rates in Bristol, Birkenhead, Liverpool, Manchester, and Salford. The greatest proportional mortality from measles occurred in Liverpool and Bolton; and from whooping-cough in Plymouth, Bristol, Birkenhead, and Salford. The mortality from scarlet fever and that from "fever" showed no marked excess in any of the large towns. The 71 deaths from diphtheria included 20 in London, six in Salford, five in Manchester, five in Leicester, and four in Leeds. No fatal case of small-pox was registered last week in any of the 33 towns, and only one small-pox patient remained under treatment on Saturday last, Feb. 16th, in the Metropolitan Asylums hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1876, against numbers declining from 2535 to 1963 on the seven preceding Saturdays; 142 new cases were admitted during the week, against 172, 178, and 145 in the three preceding weeks. Influenza was certified as the primary cause of 16 deaths in London last week. The deaths referred to diseases of the respiratory organs in London, which had been 323 and 397 in the two preceding weeks, further rose last week to 420, but were 68 below the corrected average. The causes of 62, or 1·4 per cent., of the deaths in the 33 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Salford, Bradford, Leeds, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Sheffield, Gateshead, and Newcastle.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·1, 22·2, and 23·2 per 1000 in the three preceding weeks, declined again to 22·6 during the week ending Feb. 16th, but showed an excess of 3·1 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 18·0 in Aberdeen and 19·7 in Dundee to 25·2 in Glasgow and 26·9 in Perth. The 710 deaths in these towns included 33 from whooping-cough, 25 from measles, 20 from small-pox, 10 from diphtheria, 8 from diarrhœa, six from scarlet fever, and four from "fever." In all, 106 deaths resulted from these principal zymotic diseases, against 126 and 103 in the two preceding weeks. These 106 deaths were equal to an annual rate of 3·4 per 1000, which was 1·9 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had been 43 and 37 in the two preceding weeks, further declined last week to 33, of which 25 occurred in Glasgow, six in Dundee, and two in Paisley. The deaths from measles, which had declined from 23 to 14 in the four preceding weeks, rose again to 25 last week, and included 15 in Edinburgh and seven in Aberdeen. The fatal cases of small-pox, which had been 11, 24, and 11 in the three preceding weeks, rose again last week to 20, and were all registered in Glasgow. The deaths from diphtheria, which had been seven in each of the two preceding weeks, increased to 10 last week, and included six in Glasgow. The fatal cases of diarrhœa, which had been 27 and 18 in the two preceding weeks, further declined last week to eight, of which six occurred in Glasgow. The six deaths from scarlet fever corresponded with the number in the preceding week, and included four in Glasgow, where three of the four deaths from "fever," were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 123 and 148 in the two preceding weeks, declined again last week to 153, and were 172 below the number in the corresponding period of last year. The causes of 29, or more than 4 per

cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·4 and 34·0 per 1000 in the two preceding weeks, further rose to 34·3 during the week ending Feb. 16th. During the past four weeks the death-rate in the city has averaged 31·0 per 1000, the rates during the same period being 17·9 in London and 20·5 in Edinburgh. The 228 deaths belonging to Dublin registered during the week under notice were two in excess of the number in the preceding week and included 10 which were referred to the principal zymotic diseases, against 20, 18, and 16 in the three preceding weeks; of these, three resulted from whooping-cough, two from scarlet fever, two from "fever," two from diarrhœa, and one from measles. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·5 in London and 2·7 in Edinburgh. The fatal cases of whooping-cough, which had been 12 and 9 in the two preceding weeks, further declined last week to three. The deaths from "fever," which had been three and five in the two preceding weeks, declined again to two last week. The 228 deaths in Dublin last week included 31 of children under one year of age and 71 of persons aged upwards of 60 years; the deaths of infants showed a decline, while those of elderly persons exceeded the number in the preceding week. Six inquest cases and three deaths from violence were registered; and 83, or more than a third, of the deaths occurred in public institutions. The causes of six, or nearly 3 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon H. Todd to the *President* for course of hospital study. Staff Surgeon H. W. Macnamara to the *Ophir*. Surgeons: P. N. Randall to the *Duke of Wellington*; W. R. Knightley to the *Harrier*; R. Hill to the *Ophir*; W. H. Daw to the *Rambler*; and A. H. Prichard to the *Antelope*.

The following qualified candidates for the Royal Navy Medical Service have been appointed to be surgeons in His Majesty's Fleet:—Edmund Cox, John Macdonald, Arthur La Touche Darley, William Edward Ruttledge, Thomas Francis O'Keeffe, Charles Edward Cortis Stanford, Ernest Fitzgerald Ellis, August Joseph Wernet, George Charles Cumberland Ross, Percy Francis Alderson, Douglas Victor Lowndes, John Thornhill, Henry Constantine Woodyatt, and Arthur Richard Thomas.

ROYAL ARMY MEDICAL CORPS.

Lieutenant C. H. Furnivall is to do duty at the Station Hospital, Poona. Lieutenant A. M. Sparkes is detailed to assist the Embarking Medical Officer at Southampton. Major R. P. Bond is posted to the Western Heights, Dover, for duty.

The undermentioned officers retire on retired pay:—Lieutenant-Colonel J. G. W. Crofts and Major J. Harran. Captain T. H. M. Clarke, D.S.O., is seconded whilst his services are placed at the disposal of the High Commissioner of Crete. The undermentioned Lieutenants to be Captains:—H. O. B. Browne-Mason, F. S. Penny, B. Watts, H. G. Martin, J. G. Berne, F. F. Carroll, J. D. G. Macpherson, W. P. Gwynn, S. de C. O'Grady, A. H. O. Young, E. A. Bourke, M. M. Lowsley, A. C. Lupton, G. B. Carter, N. H. Rose, P. H. Collingwood, and C. J. O'Gorman. Civil Surgeon R. McKenzie Skinner, serving in South Africa, to be Lieutenant.

The following candidates were successful at the Royal Army Medical Corps examination recently held in London for commissions:—F. W. Lambelle (2750 marks), L. J. S. Cahill (2649 marks), W. C. Stevenson (2258 marks), M. C. Beatty (2220 marks), R. L. Hagger (2171 marks), H. W. Long (2098 marks), and J. R. Welland (1905 marks).

INDIA AND THE INDIAN MEDICAL SERVICES.

Lieutenant-Colonel Charles Little, Madras Establishment, is promoted to Colonel.

At the Indian Medical Service examination held in London on Feb. 8th the following candidates were successful:—

Name.	Marks.	Name.	Marks.
A. G. McKendrick	3449	C. B. McConaghey... ...	2611
G. K. Charles	3392	W. D. Ritchie	2591
J. W. Little	3090	G. C. L. Kerans	2560
D. St. J. Moses	3003	E. W. Browne	2575
N. E. H. Scott	2911	E. C. Hepper	2567
H. B. Foster	2882	F. T. Thompson	2496
G. B. Butt	2842	J. W. Illius	2478
C. E. Southon	2788	J. B. Christian	2417
H. R. Nutt	2780	L. P. Brassey	2391
J. K. S. Fleming	2740	G. Fowler	2357
H. W. Illius	2704	A. Murphy	2219
F. W. Sumner	2703	S. Bose	2212
J. A. Barnes	2700	P. L. O'Neill	2133
J. Husband	2627	C. F. Marr	1895

MILITIA MEDICAL STAFF CORPS.

The undermentioned Surgeon-Lieutenants to be Surgeon-Captains: A. H. Benson and W. Fletcher. The transfer of Surgeon-Lieutenant W. E. M. Corbett from the 2nd Volunteer Battalion the Devonshire Regiment is cancelled at his own request.

VOLUNTEER CORPS.

Rifle: 1st Cadet Battalion the Queen's (Royal West Surrey Regiment): Acting Surgeon Arthur Charles Elliman to be Surgeon-Lieutenant. 1st Cadet Battalion the Buffs (East Kent Regiment): Acting Surgeon Charles Walter Scott to be Surgeon-Lieutenant. 4th Volunteer Battalion the Bedfordshire Regiment: The undermentioned gentlemen to be Surgeon-Lieutenants: Edward John Cross and William Fellowes Fisher. 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Major R. S. Gibb resigns his commission and is granted the rank of Surgeon-Lieutenant-Colonel, with permission to wear the uniform of the battalion on his retirement. 2nd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant D. L. Davies to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Aberdeen Company: The undermentioned gentlemen to be Surgeon-Lieutenants (Supernumerary): William Archer Irvine Fortescue, Francis Kelly, Alexander Ogston, and Thomas Fraser.

SOUTH AFRICAN NOTES.

Lieutenant J. Matthews, R.A.M.C., reported missing, is believed to be a prisoner (Belfast, Feb. 13th).

Lieutenant J. J. W. Prescott, R.A.M.C., is reported to have broken his collar-bone through a fall from his horse, near Knelfontein (Feb. 3rd).

Progress Report.—Civil Surgeon Bruce, improving (Newcastle, Feb. 14th). Civil Surgeon Williams, progressing favourably and convalescent (Feb. 15th). Lieutenant Forbes-Winslow, R.A.M.C., rather better, and Civil Surgeon Mowatt, no change, Pretoria (Feb. 16th). Civil Surgeon J. J. O'Reilly, dangerously ill (Kimberley, Feb. 16th).

The following officers were discharged from hospital to duty for the week ending Feb. 10th:—Major R. Holyoake, R.A.M.C., Civil Surgeons A. C. Hunter, G. R. Thompson, and Lieutenant W. H. S. Nickerson, R.A.M.C.

Inspector-General of Hospitals and Fleets Henry Charles Woods, M.D., M.V.O., has been promoted to a Commandership of his order.

Surgeon-Captain A. Mackenzie of the 4th Battalion the Somerset Light Infantry (Militia), Taunton, has been recommended for the Royal Humane Society's medal for endeavouring to save a Swede from drowning at East London, South Africa.

ROYAL COLLEGE OF SURGEONS IN IRELAND: DENTAL EXAMINATION.—The following candidates having passed the necessary examination have been admitted Licentiates in Dental Surgery of the College: Mr. Henry Earith Hayes and Mr. Daniel Leveck Rogers.

VACCINATION AT EXETER.—At the meeting of the Exeter Corporation of the Poor held on Feb. 12th it was reported that during the half year ended Dec. 31st, 1900, there were 476 births registered, 342 cases of successful vaccination were certified, 17 certificates of conscientious objection were granted, 51 children died unvaccinated, and the vaccination of 48 was medically postponed. The average of conscientious objections was below that for the corresponding half of 1899.

Correspondence.

"Audi alteram partem."

"LEGISLATION AGAINST NATIONAL INTEMPERANCE."

To the Editors of THE LANCET.

SIRS,—Dr. William Carter, having collected facts which prove that a high mortality is caused by excessive indulgence in alcohol, demands that something shall be done. THE LANCET endorses his views, "A Country Practitioner" endorses THE LANCET, and I am happy to endorse "A Country Practitioner." But the difficulty is to know what to do. We are hardly pioneers. The discovery that alcohol is the cause of many ills has been made some thousands of times during (historically) at least 5000 years, and some hundreds, if not thousands, of attempts have been made to deal with the evil—to do something. Some of these attempts have been more or less successful. Occasionally despotic power has succeeded. But despots do not live for ever, and despotic power is apt to change its objects. Occasionally religious fanaticism has succeeded, but only when it has limited intercourse with more free if more drunken communities to such an extent that its adherents are made barbarous as well as sober. The Turks are a case in point, and their temperance propaganda has been assisted by such persuasive means as the pouring of molten lead down the throats of drunkards. We who live under civilised conditions have a harder task. It is admitted on all hands that the difficulty of the temperance problem increases proportionately with the density of the population. It is greatest in towns. Now the least populated English county (Westmoreland) has 84 inhabitants to the square mile, and England is studded with great cities. Many attempts at temperance reform have been made in civilised countries—the United States, Canada, Scandinavia, Australia, and New Zealand, for example. Will Dr. Carter or anyone else tell us of a single instance in which they have been successful in a town of even so few inhabitants as 10,000, or in rural districts when the density of the population was half that of Westmoreland. Nay, can they tell us of an instance when public law-breaking resulting in public degradation (including increased drunkenness) has not followed on such an attempt. No doubt we could by Act of Parliament instantly make England more sober than at present. But only for a time. The open sale of drink would be disorganised, and men perforce would be temperate till the secret sale were organised. Then, following the rule elsewhere, they would be more drunken than ever, and the secret drinking and lawbreaking would have their other attendant evils.

I am, Sirs, yours faithfully,

Southsea, Feb. 16th, 1901. G. ARCHDALL REID.

To the Editors of THE LANCET.

SIRS,—The medical profession and the public generally owe to you a debt of gratitude for your very able and interesting leading article on "Legislation against National Intemperance." If such views reflected the judgment of the medical profession as a whole a volume of example would be set up that would do more to diminish intemperance than 50 years of legislation. Cannot some effort be made to establish a common doctrine in the profession? The modern view, in my opinion, is: (1) alcohol is *not* a stimulant; (2) alcoholism is a defect of will in relation to intoxicants (e.g., alcohol in England, &c.; ether in Ireland, where vast quantities are taken; opium amongst Mohamedans, who are forbidden alcohol); and (3) the predisposing cause of alcoholism is nervous instability of every kind. The children of parents with physical weakness take to narcotics like ducks to water. If the public were aware of this, playing with fire would not be so lightly risked. Alcoholism can no more be cured by imprisonment than can morphinism.—I am, Sirs, yours faithfully,

ASPINALL MARSDEN, M.R.C.S. Eng., &c.

Lightcliffe, Yorks, Feb. 18th, 1901.

To the Editors of THE LANCET.

SIRS,—May I express a hope that your powerful leading article and the correspondence it will call forth may result in some organised effort on the part of the medical profession to educate public opinion in this matter of serious national importance? I quite agree with the remarks of a "Country Practitioner" with the exception that I find it quite possible to be candid on the question of the abuse of alcohol and at the same time retain publican patients, many of whom are perfectly conscious of the evils of their trade and are temperance reformers at heart. Now that the great body of our profession, consultants and general practitioners, are alive to the evils resulting from the habitual abuse of alcohol, while we constantly have evidence of the hopelessness of expecting the two great political parties in the state to treat the subject on non-party lines as one of national urgency, I would suggest that we do, as we have done in other matters of grave importance to the public health, force the questions upon the public and so in time upon the state. Several of our most influential consultants are known to be in favour of temperance reform and a strong council for the "promotion of legislation against national intemperance" could easily be formed.

Only the other day the manager of one of the largest public-houses in my district told me that women were his best customers and that they were not the wives of the lowest class of men but of skilled mechanics earning from £2 to £3 a week. All of us in general practice in London must constantly see small babies in perambulators blocking up the doorways of the public-houses as late as 11 and 12 o'clock at night and their brothers and sisters playing hide and seek round the different bars whilst their mothers are inside drinking. The sending of children to public-houses for drink is an evil, but the evil of allowing mothers to take their children with them and keep them in the physical and moral atmosphere of a public-house up to 12 o'clock at night is one attended with more far-reaching consequences. Educated public opinion has compelled the State to interfere in many ways between parent and child in the interest of the latter, so surely it could do something to put a stop to this most pernicious form of cruelty.

I am, Sirs, yours faithfully,

London, W., Feb. 17th, 1901. M.D., B.S. Lond.

"THE SURGERY OF PREGNANCY AND LABOUR COMPLICATED WITH TUMOURS."

To the Editors of THE LANCET.

SIRS,—All obstetricians must have read with great interest Mr. Bland-Sutton's excellent lecture on ovarian tumours complicating pregnancy and labour. It seems to me that all of them will not accept the very decisive conclusions at which he arrives. That the proper practice when an ovarian tumour is detected during pregnancy is to remove it by ovariotomy is consistent with modern opinion, and no one, nowadays, I think, would recommend any other treatment. That cœliotomy is the only admissible procedure when an ovarian tumour is impacted in front of the fœtal head in actual labour and that puncture of the tumour is always bad practice is, I venture to think, a sweeping conclusion which facts do not justify. If in every such case the services of a skilled gynæcological surgeon expert in all the details of modern abdominal surgery could be obtained I do not doubt that cœliotomy would be the most hopeful procedure. But consider how exceptionally such expert attendance, with all the necessary appliances, can be had. I can imagine few conditions more trying for the practitioner, or more hopeless for the patient, than such an abdominal section performed on the spur of the moment by a man who has not previously had the opportunityof practising this sort of work.

Nor do I see that Mr. Bland-Sutton has at all proved that puncturing the tumour impacted in front of the presenting part is either an unscientific or a hopeless procedure. The tumour in such a case is necessarily very small. If it had been large it would have risen into the abdominal cavity with the enlarging uterus. A simple aspiration, therefore, with proper antiseptic precautions would, under such circumstances, I submit, be a comparatively safe procedure, which might avert such a formidable operation as was found to be necessary in one of Mr. Sutton's cases in which the impaction of the fœtal head in the pelvic brim necessitated a Cæsarean section as well as an ovariotomy. In McKerron's paper 43 cases are tabulated in which this practice was adopted, in which eight of the

mothers died, a mortality large beyond doubt, but much less than that following either re-position or allowing the head to squeeze past the undiminished tumour. It is to be noted, moreover, that in most of these cases re-position had previously been attempted, so that the tumour had necessarily been subjected to mechanical injury, and also that most of them occurred many years ago before the days of strict antisepsis. It is difficult to see why a simple aseptic puncture should be branded as "an unsurgical procedure," since it may not only obviate the necessity of a Cæsarean section, but of the almost more formidable danger of an ovariotomy by unskilled hands during the actual progress of labour. If the contents of the tumour were found to be of such a character as to prevent its collapsing, then, of course, ovariotomy must at once be proceeded with.

In some of these cases, since the tumours are necessarily small and generally with long pedicles (Mr. Bland-Sutton says: "As is always the case in such circumstances it had a long and slender pedicle") vaginal ovariotomy might possibly be successfully practised. McKerron gives three cases in which this alternative was adopted, in all of which the mothers recovered.

While I do not question that in such hands as Mr. Bland-Sutton's coeliotomy is the practice which should be adopted, he has not convinced me that I was wrong in writing of these cases in the last edition of my book on midwifery: "It is to be noted, however, that accurate diagnosis as to the character of the tumour is not generally possible and it seems to me that, with careful antisepsis, a preliminary puncture is the simplest and probably the safest procedure."

I am, Sirs, yours faithfully,

Grosvenor-street, W., Feb. 15th, 1901. W. S. PLAYFAIR.

To the Editors of THE LANCET.

SIRS,—If you will print the inclosed remarks made by Dr. Herman before the Obstetrical Society in 1898 your readers will be able to read for themselves his advocacy of vaginal tapping. I am, Sirs, yours faithfully,

Cavendish-square, W., Feb. 18th, 1901. J. BLAND-SUTTON.

[INCLOSURE.]

Adjourned Discussion on Dr. McKerron's Paper on "The Obstruction of Labour by Ovarian Tumours in the Pelvis."

Dr. Herman said that Dr. McKerron's paper was the fullest account of the complication of labour with ovarian tumours that had yet been given. He (Dr. Herman) agreed in the main with Dr. McKerron's advice, but there was one method of treatment, the credit of which he believed Dr. McKerron had given to Fritsch, which he thought deserved fuller consideration and commendation than Dr. McKerron had given to it—viz., the making an incision into the cyst through the vagina and stitching the opening in the cyst to the margins of the vaginal incision. In this way the emptying of the cyst contents outside the peritoneum was secured. If the cyst were a dermoid, as many of the cysts which obstructed labour were, simple tapping was attended with much danger of the cyst contents escaping into the peritoneal cavity and setting up peritonitis. (Of the 43 cases in Dr. McKerron's paper treated by tapping or incision 24 died.) This danger was avoided by Fritsch's procedure. He (Dr. Herman) did not advise this for tumours that could be pushed up, nor for those which came under the care of experienced operators in circumstances suitable for the performance of ovariotomy. But many of the cases occurred in the practice of accoucheurs having little or no experience in ovariotomy. The time at which the reposition of an ovarian tumour became impossible was in the second stage of labour, when the tumour was driven down by the advancing presenting part of the child. At this time prompt treatment was needed; there was not time to place the patient under the care of an experienced surgeon. In such circumstances he thought incision and suture was the best course which an accoucheur inexperienced in operating could follow. If such a case came under the care of an experienced operator he inclined to agree with Professor Spencer in thinking the abdominal mode of operating better than the vaginal. If the tumour was driven down into the pelvis there was usually tension of its pedicle; and tension of the pedicle called for extreme care in tying it, produced risk of the knots slipping and the compression of the vessels being imperfect, with hæmorrhage as the result, and such after-hæmorrhage it would be almost impossible to stop by vaginal treatment.

"MR. VICTOR HORSLEY'S REPORT."

To the Editors of THE LANCET.

SIRS,—I have read Dr. Bruce's letter in your last issue with feelings of astonishment and regret. Without communicating with me previously he tells you and through you my constituents that my last report to them was incorrect and "my dicta in the highest degree misleading." After this grave general charge against my accuracy he goes on to state that "it is as nearly as possible the opposite of the truth to say that the representatives of the friendly societies would never consent to the question of the wage-limit being discussed at the Conciliation Board. On the contrary this was one of the questions which we (*sic*) expressly deferred for discussion until such a board would be formed." Dr. Bruce thus raises a plain issue. Although he does not make the direct statement the reader of his letter can only assume that the committee of the General Medical Council, of which Dr. Bruce is a member, had at one time or another agreed with the representatives of the friendly societies that they should defer the discussion of the wage-limit question to the meeting of the Conciliation Board. As I knew that no arrangement of this kind existed in the official documents on this subject open to me I telegraphed to Dr. Bruce and asked him to give me reference to the record of this transaction which he advanced in your last issue and on which he founded his charge against the accuracy of my report. I was not in the least degree surprised to receive the following telegram from him: "No record published agreed to first sitting." We are, therefore, to take it that some secret meeting took place and that we are indebted to Dr. Bruce's memory alone for what passed at that meeting. I must now prove, first, that Dr. Bruce's memory has played him false; second, that it is not my facts which are incorrect, but his; and third, that it is not my statements which are misleading, but his own. As reported in the minutes of the General Medical Council, 1899, p. 530, the Committee of the General Medical Council on Medical Aid Associations, of which Dr. Bruce is a member, held a formal conference with the representatives of the friendly societies on May 4th, 1898. A verbatim shorthand report of this conference was issued to the members of the Council on June 5th, 1899. At this conference the question of the wage-limit was brought up. The hostility of the representatives of the friendly societies to it was both unanimous and extreme, with the result that the question was finally and absolutely put into the background. From beginning to end of the conference in question there was not a single word said about this matter being deferred for discussion at the Conciliation Board. On the contrary it was expressly declared from the chair before the formation of a board was raised that the question of wage-limit was disposed of. Whatever Dr. Bruce may remember as having occurred at some previous secret conference of which according to his own statement no record is open to myself or others of his colleagues, that is of necessity entirely obliterated by what passed at the subsequent conference on May 4th, 1898. As we are in possession of a verbatim printed report of the proceedings of that meeting there is no room for any misunderstanding or lapses of memory as to what was the attitude of the representatives of the friendly societies on the question of wage-limit. Dr. Bruce makes a kindly reference to my anxiety for the interests of my constituents, the registered practitioners of England and Wales. I should be betraying those interests if I failed to report accurately and faithfully as known to me the facts bearing upon questions towards which I am placed in a judicial and fiduciary position. I have had to bear what I suppose is an average number of misrepresentations of my public acts since my election to the General Medical Council, but this charge of inaccuracy now formulated by Dr. Bruce, the Direct Representative of Scotland, is not only the most painful but the most untrue of them all.

I am, Sirs, yours faithfully,

VICTOR HORSLEY.

P.S.—Since writing the above Dr. Bruce has sent me the following by letter in response to several telegrams from me asking him whether May 4th, 1898, or what was the precise date on which his imaginary arrangement with the friendly societies' representatives was arrived at. "It is terrible to be pelted with telegrams with no records to refer to. 'May 4th, 1898,' has receded into the utterly hazy distance with me. Why not try Glover? He must have some sort of journal. I never kept anything of the kind." To comment on Dr. Bruce and his methods of conducting the public business of the profession would be waste of your readers' time.

THE OUTBREAK OF DIPHTHERIA AT OLD HEATH.

To the Editors of THE LANCET.

SIRS,—Your article in THE LANCET of Feb. 9th, p. 426, upon the outbreak of diphtheria at Old Heath, Colchester, describing the attitude taken up by Dr. George Brown, the

medical officer of health of Colchester, opens up more than one question of some importance. Even those of us whose experience agrees with that of Mr. E. A. Hunt in the treatment of diphtheria by means of the injection of antitoxin cannot admit that any practitioner should be coerced into using it. At the same time, as Dr. Brown has stated that he possesses a remedy for the disease which is of greater value than antitoxin and that the results of his method of treatment "are incomparably superior and more satisfactory than those given by the serum treatment," he must surely be in a position to prove his statement and only good could arise by permitting others to know of the details of his method. Indeed, in view of the fact that the patients of other practitioners are admitted to the fever hospital, the latter are certainly entitled to have demonstrated to them that the treatment in the institution will be satisfactory to them; otherwise it is hardly to be expected that they will advise the removal of those under their care, and the community for the well-being of which the medical officer of health is responsible will necessarily suffer.

I am, Sirs, yours faithfully,

HERBERT JONES,
Medical Officer of Health, Herefordshire Combined Districts.

Hereford, Feb. 16th, 1901.

"ARSENICAL BEER POISONING."

To the Editors of THE LANCET.

SIRS,—Permit me to point out that in your report of my contribution to the discussion on this subject at the meeting of the Royal Medical and Chirurgical Society on Feb. 12th my opening remarks are not quite correctly reported in that they perhaps seem to cast an element of reproach on my Manchester *confrères* for not detecting the cause of the epidemic earlier, whereas nothing could have been further from my intention than to imply any such reflection. Those who were present at the meeting will bear me out that after speaking in terms of high praise of Dr. Reynolds's discovery of the cause of the epidemic I somewhat playfully remarked that in a certain work on forensic medicine, the author of which I stated should be nameless, there occurred the statement that "in cases of peripheral neuritis of doubtful origin it is advisable to carefully examine the urine for arsenic." I, in common I am sure with many others, have nothing but admiration for the skill with which the mystery of the epidemic has been elucidated by Dr. Reynolds, Dr. Dixon Mann, Professor Delépine, and others.

I am, Sirs, yours faithfully,

Weymouth-street, W., Feb. 19th, 1901. ARTHUR P. LUFF.

THE COVENTRY DISPENSARY.

To the Editors of THE LANCET.

SIRS,—I am sure that your readers will agree that the profession of medicine is much indebted to the Birmingham and Midland Counties Branch of the British Medical Association for their attitude in refusing to give professional recognition to the medical officers of the Coventry Dispensary until they either bring their institution into line with professional opinion or resign the appointments they hold. Out of some 110 members present at the meeting there were but six dissentients, and it is gratifying to find that in such a meeting so many men were banded together in the common interests of reform.

If other cities were to take a decided stand against such institutions there would be less heard of professional abuse, and medical attendance upon any and all-comers irrespective of their means and position for so paltry a sum as that often offered would cease to exist. At the same time the fact would be brought home to medical men that in visiting members of dispensaries and benefit clubs financially they (the medical men) would be the losers, for it is absolutely impossible that a few shillings a year would repay the medical man for serving a lay committee. He must sooner or later recognise that he is "farmed" by such committee of laymen or that he is willing to give his services for philanthropic motives.

My suggestion is that immediate steps should be taken in other localities, through the British Medical Association and the press, to condemn any medical practitioners holding appointments in institutions not conducted upon lines in accordance with professional opinion, supposing, of course, due and sufficient warning had been given to them. After such condemnation, a reasonable time being allowed for alteration of their conduct, any practitioners transgressing should be indicted before the General Medical Council as being the servants of laymen who exploited them for pecuniary gain, and, if I mistake not, their positions would be analogous to that of Dr. Irvine and the Birmingham Consultative Institute.—I am, Sirs, yours faithfully,

Coventry, Feb. 19th, 1901. EDWARD PHILLIPS.

SCARLET FEVER AND HOSPITAL ISOLATION.

To the Editors of THE LANCET.

SIRS,—Will you allow me to correct the report in THE LANCET of Feb. 16th, p. 477, of my remarks at the meeting of the Society of Medical Officers of Health on Feb. 8th? I said a good deal more than is reported, but with this I shall not deal. I did not say that isolation hospitals were everywhere overcrowded—this we know is not the case. What I did say was that they were very commonly too small for the requirements of the districts to which they belonged, and frequently overcrowded, which is a very different thing. Again, I did not say that our own hospital was grossly overcrowded, but that it had at times been greatly overcrowded in the attempt with inelastic accommodation to meet the requirements of epidemic conditions. It is certainly not overcrowded at the present time.

I am, Sirs, yours faithfully,

Nottingham, Feb. 16th, 1901. PHILIP BOOBBYER.

"MEDICAL CERTIFICATES AND THE LONDON SCHOOL BOARD."

To the Editors of THE LANCET.

SIRS,—It is surely obvious that the certificate system of the School Board wants alteration and I would suggest that some such arrangement as the following should be agreed upon. In the case of a child or of a teacher, if the patient or the patient's legal guardians can pay for a certificate let them do so. If they are too poor, and the medical man in attendance likes to give one out of charity let him do so, but if not, when a patient under the board cannot get a certificate the fact might be reported to the board. The medical officer might then write to the practitioner in attendance and inform him that it is his duty to see the patient and he should ask the practitioner to fix a time when they could meet over the case. If the practitioner chose to attend he should get a fee of, say, 1*s.*, after the scale for notification of infectious disease as regards a patient connected with a public institution. If he did not choose to attend he would get no fee and the medical officer of the board would be in a perfectly correct position. The medical officer draws a large salary and it seems to me that it is his plain duty to sign medical certificates for the board when required. The shilling should be paid by the board, for I do not fancy that many cases would arise where the above arrangement would have to be carried out.

I am, Sirs, yours faithfully,

INTERESTED.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Reforms and Improvements in the Indian Medical Service.—Further Increase of the Plague Epidemic.—Miscellaneous News.

IN order to relieve officers of the Indian Medical Service proceeding on furlough the Government of India have sanctioned the engagement of 20 private medical practitioners. In addition to this temporary measure I understand that it has been practically settled to increase the permanent strength of the service, and in addition also to create an asylum service, which will be open to officers who have had special experience of the insane. The pay for this branch also will be sufficiently attractive to draw in men from outside. I understand also that the jail service will be improved so that those officers who wish to devote their energies in this direction for a long period will be duly

rewarded. The long-looked-for re-opening of leave is daily expected, as in addition to the assistance sanctioned from outside 20 officers have returned from China. It is said that the constant work of the past few years has caused officers to break down at their posts and that the amount of invaliding is becoming serious. The private medical practitioners will be engaged for one year. The pay offered is Rs.600 a month for those holding a diploma in public health and Rs.500 a month for others not so qualified.

The plague deaths throughout India have again increased in number this week—viz., from 3277 to 3396. The increase is entirely in Western Bengal and Bombay city. The figures for Bengal are 2261 against 2181 last week. Patna returns 1231 deaths; Saran, 543; Monghyr, 284; Gya, 181; and Calcutta, 54. In Mysore there is a decline from 367 to 272, and in the Punjab from 55 to 23. In Bombay city, however, there has been a great rise. Last week 308 deaths were recorded, whereas the deaths to-day are put at 427. There are six European cases in hospital, all mild. Of the total deaths from plague last week there were only seven children. Since these figures were published the mortality has risen still further, the deaths for Jan. 30th alone having exceeded 100. The general mortality of the city is very high, 1419 deaths having been reported during the past week—a rate of 89 per 1000 per annum. During the past week plague has threatened to break out in two other quarters—viz., at Karachi and at Benares. In the district of the latter city several cases apparently occurred before the disease was recognised. Two villages are infected. Karachi city is once more threatened. An indigenous case is reported and large numbers of dead rats have been found in the market quarter.

The hospital ship *Carthage* has just arrived from Taku after a splendid voyage, bringing three medical officers in charge of 82 native invalided soldiers and about 100 followers. The alterations in the hospital ship *Gwalior* having been completed she will leave Calcutta for Hong-Kong on March 6th.

A severe outbreak of beri-beri has continued in the 2nd Madras Infantry for some time, causing sickness in about 25 per cent. of the regiment. The mortality has been low and most of the men have been able to return to duty.

Feb. 2nd.

THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

History and Formation of the Northumberland and Newcastle Medical Association.—The Amalgamation with the Newcastle Medical Ethical Society.

A FEW months ago the dissatisfaction of the Tyneside colliery surgeons reached an acute phase and consequently a desire to organise was manifested by various practitioners of the county of Northumberland. Close by, on the other side of the Tyne, at Gateshead, the parent association for this part of England, the union of the medical men of that town had given the example of useful and successful organisation. There was also at Newcastle a medical ethical society, but the idea then germinating was in favour of the more widespread organisation of a county rather than that of a mere local society. For this there was also an example close at hand in the County of Durham Medical Union. On the other hand, the latter society was naturally particularly anxious to see their nearest neighbours organise on similar lines to themselves. Indeed, this is how the movement is likely to spread. First the practitioners of a town form a union, then they find that their efforts are likely to miscarry because the practitioners in the outlying districts and surrounding country have not adopted the same principles and policy as themselves, consequently efforts are or will be made to bring the whole county into union. But hardly is this achieved than the county, as a unit, feels itself at a disadvantage if the neighbouring counties are not likewise organised, and thus the movement, to be thorough and absolutely effective, must spread from county to county till the medical men in all parts of the kingdom are united together for the maintenance of the same principles, the enforcement of the same means of action, and the defence of the same interests.

In Northumberland matters were brought to a head by difficulties which arose between the Backworth miners and the colliery surgeons of that district. The County of Durham Medical Union thought that the psychological moment had arrived when something might be done to crystallise the somewhat vague aspirations of the Northumberland medical practitioners. They consequently arranged to hold a meeting at the County Hotel, Newcastle-upon-Tyne, on August 23rd, 1900, and inserted advertisements in the local press inviting medical men to attend. The response was not very encouraging, for only a few practitioners were present. This, it should be noted, is what very generally happens. The first step is always the most difficult, and no experienced organiser would allow himself to be discouraged because the earlier efforts meet with but slight support. The meeting, though small, did good work. They determined to form a society and appointed Mr. Rutherford Morison as the President *pro tem.* They also selected a secretary, decided that a draft of rules should be prepared, and circulars were sent to all the practitioners inviting them to another meeting at which the union should be definitely constituted. This convocation differed from most of the other similar efforts that have been made, for it not only urged the advantages of organisation, but proposed immediate action and took the form of a *plébiscite*. With the circular there was a card which was to be returned to the secretary with answers to the following questions:—

1. Are you in favour of an increase of the rate of professional remuneration from 6d. to 9d. per fortnight for every adult workman?
2. Will you support a combined effort on the part of the medical profession to obtain this object?

The second meeting was held in the library of the Royal Infirmary on Sept. 6th and this time there was a good attendance. It was then definitely decided to form a medical union, and a committee was appointed carefully to examine and revise the proposed rules and to study the question of the remuneration for contract work according to the information that was now coming in from all parts of the country. Then a third and final meeting was held on Sept. 20th when the rules were adopted and the society was definitely constituted. The adoption of rules often causes much discussion and loss of time. In this case, however, the precedent established in the county of Durham served as a guide and it required hardly more than an hour to explain and vote upon the rules. Thus it will be seen that as experience extends the work of organisation becomes simplified. The dispute with the Backworth miners and the programme for future action was not so readily settled; but it was very generally felt that it was absolutely necessary to fix definitely a minimum rate of remuneration for colliery contracts; that not only must all members pledge themselves to observe this rule, but that it was necessary to create a fund to compensate those who might be victimised in this effort to improve the position of the profession. For the general purposes of the medical union each member was called upon to pay an annual subscription of half a guinea; but the indemnity fund, as it is called, is maintained by supplementary and voluntary subscriptions collected as the emergency arises, according to the necessities of the case and the means of the subscribers.

The next step was to effect an amalgamation with the Newcastle Medical Ethical Society, which had been in existence for more than a year and which had done excellent pioneer and educational work. This society was, however, limited to the town of Newcastle, and both organisations felt that it would be to their mutual advantage to amalgamate, and this was effected on Nov. 6th. The rules were slightly modified so as to comprise the principles of the two organisations and the amalgamation thus brought about is entitled the Northumberland and Newcastle Medical Association. Its object as the rules now stand is:—

To protect the interests of members of this association generally, but more particularly from unfair competition and from any attempts that may be made to induce or compel medical practitioners to accept insufficient remuneration for professional services. To establish and maintain minimum rates of payment for medical contract work in relation to all classes of workmen, members of friendly societies, sick and other clubs, lodges, insurance and other companies, and societies. To coöperate with and assist (when requested) the members of all approved local medical associations in carrying into effect any of the resolutions passed by such associations as may be approved by a majority of the members of this association in general meeting assembled.

On Dec. 20th another general meeting was held and a

standing sub-committee was then appointed to which all questions in relation to medical ethics might be referred. While this question of building up a constitution was progressing the more practical work of enrolling members was also actively pushed forward. In this the association, and indeed the profession generally, are much indebted to Mr. Rutherford Morison, who not only lent the influence of his name as president of the association, but has devoted a great amount of time and personal effort, not merely in presiding over the meetings, but in writing, telegraphing, and in travelling long distances so as to interview and persuade various practitioners who were hesitating to join and work with their colleagues in the profession. As one of the leading operating surgeons in the north of England Mr. Rutherford Morison has no personal interest to serve, and therefore his opinion acquires the weight rightly attached to all disinterested and altruistic endeavours. It is estimated that there are about 350 medical men in actual practice in the county of Northumberland and the town of Newcastle. In answer to circulars sent to all these practitioners and in response to the letters which had to be written to some of them and to the personal persuasion that in some instances had to be brought to bear 142 practitioners have joined the association and most of them have signed the following form:—

I desire to become a member of the Northumberland and Newcastle Medical Association and I undertake, if elected, to observe and conform to the rules, regulations, and decisions of the association. I agree also

(a) To accept no rate of remuneration for professional services lower than that approved by the association.

(b) Not to assist by consultation or otherwise (except in emergency) any practitioner in the counties of Newcastle-upon-Tyne or Northumberland who is declared by the above association to be opposed to the objects of the association.

At the time of the amalgamation the Newcastle Medical Ethical Society had 92 members, and the majority became members of the Northumberland and Newcastle Medical Association. But such union is not without its difficulties, for the interests and the position of the town practitioner differ widely from those of the rural districts, who, for the most part are colliery surgeons. It was at the commencement of 1899 that Dr. Alfred Cox, as secretary of the Gateshead Medical Association, urged that a similar organisation should be formed on the Newcastle side of the river Tyne. Dr. J. S. McCracken, agreeing, called an informal meeting of the Newcastle west-end practitioners in his own house. This was on Jan. 24th, 1899. 30 invitations had been sent out and no less than 23 practitioners attended. A committee was at once elected to organise a large meeting to which all the practitioners of Newcastle would be invited. This meeting was held at the Royal Infirmary on Feb. 15th following and was remarkable for its large attendance. It is estimated that there are about 140 practitioners in Newcastle and that quite 100 were present. Mr. J. Ackworth Angus was in the chair and the meeting unanimously and enthusiastically decided to form an association, to which they gave the title of "Ethical Society," and appointed a committee to frame a set of rules. These rules dealt with the future more than with the past—that is to say, their practical effect was to prevent the increase rather than to secure the abolition of old-established abuses. From the very beginning the association made a firm stand against the National Deposit Friendly Society. Of all such organisations this is probably the best, but it was new and if it gained a footing in the town then there would be yet another medical aid society to contend against. Also, there was a great objection to a lay society of this description dictating its terms even though these terms were fairly liberal. The National Deposit Friendly Society offered the Newcastle medical practitioners a 2*s.* 6*d.* fee for every other day and 1*s.* for the intermediary days. Thus if a patient required three visits in the course of six days there would be three fees of 2*s.* 6*d.* each, but if it was necessary to visit the patient every day then there would be three fees of 2*s.* 6*d.* each and three of 1*s.* each. This arrangement, it will be seen, is a great improvement on the system of weekly subscription paid whether well or ill. The medical attendant gets a much better fee, the society guarantees that the fee will be paid, and he is paid in due proportion to the work he does. Nevertheless, the Newcastle Medical Ethical Society decided to have nothing to do with the National Deposit Friendly Society. They would not allow the society to advertise any of their names and the only approach to a concession made was that of giving patients a detailed bill, which, of course, any patient has a right to claim.

While the Newcastle Medical Ethical Society was thus warning against the comparatively liberal terms of the National Deposit Friendly Society some of its members were taking the miserable allowance of 3*s.* 6*d.* per head per annum from members of the local medical aid association. There are also many friendly societies that do not pay more. But, worse still, it was now stated that at least one society intended to reduce the fee from 3*s.* 6*d.* to 3*s.* per annum and that both juvenile and female lodges were to be created. Consequently, and to meet this, the members of the Newcastle Medical Ethical Society decided that they would resign if any such alterations were made, and so that their position should not be occupied by others they resolved: "That no member accept a friendly society lodge at a less rate than was paid to the previous doctor"; and also, "that no juvenile lodge or juvenile members be accepted under 4*s.* per member per annum; also that no female lodge or member be accepted by any member of this society." It will be seen, therefore, that if little or nothing was done to remedy existing grievances the action taken was fairly energetic so as to prevent the extension of such abuses. The efforts made by the National Deposit Friendly Society and the Medical Aid Association to implant themselves in Newcastle were frustrated, as also the attempts of the friendly societies to lower the rate of subscription and to create female and juvenile lodges. One female lodge existed before this attempt at medical organisation; it still exists to-day; but its medical officer will resign when he receives a formal letter from the Northumberland and Newcastle Medical Association calling on him to do so. Up to the present the latter and more recent organisation has had its time absorbed dealing with the difficulties of the colliery surgeons, but at the next general meeting the interests of the town practitioners will be taken in hand. The Newcastle Medical Ethical Society, it has been seen, was constituted in February, 1899, and by amalgamating with the Northumberland Medical Association in November, 1900, ceased to exist as a separate body, and the joint organisations now took the title of the Northumberland and Newcastle Medical Association.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Overcrowding and Housing.

A CONFERENCE on the housing problem was held in Manchester on Feb. 9th. The chairman in a vigorous speech gave it as his opinion that "insanitary property should be condemned and compulsorily closed." A city councillor urged the local authorities "to vigorously use the powers they already possess under the Housing of the Working Classes Act, 1890." The president of the Trades Council said that "something of a definite character should be done." The conference was rich in such phrases which sound well and commit nobody. In April last a similar conference was held in a cooperative hall in this city, the only outcome of which was the passing of a resolution approving of the formation of a "Manchester, Salford, and District Housing Reform Council," and the bodies convening the meeting were asked to "appoint a council with power to add to their number." But amid all the vaporous rhetoric too often leading to nothing practical some facts were stated by Mrs. Clay, a lady well known for her work among the poor in the Hulme district, which show the pressing need for action in addition to talk. Speaking from an experience of nearly 20 years, she says that "the people are obliged to herd together without regard to health or decency." In one house with kitchen, scullery, and two bedrooms there are three families—six adults and eight children. In another house one room is the dwelling-place of a sandstone hawker, his wife, and three children. One of the children died and lay there for a week, the rest of the family living, eating, and sleeping in the room as usual. In another house with five rooms and a scullery there were 19 persons, and 16 in one of the same size close by. Not a stone's throw from these were two houses, each with one small bedroom, in which were two families, one of six and the other of seven children; the eldest of each family was a girl of 15 and 16 respectively. The family income of each was 18*s.* and the rent was 4*s.* As Mrs. Clay says, "habits of morality, decency, cleanliness

were, under such conditions, an utter impossibility." The difficulties in solving this problem are very great. Private enterprise is slow to come forward. The city council receives more abuse than thanks when it closes insanitary dwellings or clears them away. The builders of cottage property who sail close to the wind as regards the "building by-laws," and have reduced jerry-building to a fine art, are loudest in their denunciations of the corporation if they erect "barrack dwellings" or any other dwellings for the working classes, and say the corporation are becoming "speculative builders." But the corporation buildings in Ancoats appear to have brought down the death-rate in places by over 40 per cent. Our freedom, which is sometimes licence, would perhaps rebel against the proceedings said to be taken against dirty people and dirty houses in Berlin. There the former may be removed to a kind of workhouse in which they are detained while their houses are thoroughly cleansed and they themselves instructed in cleanly habits. A certain stratum of our population will always be filthy unless compelled to be clean, and is thus a constant danger to those around. Various schemes for spreading the people wider apart are at present in the "talked-of" stage, and may perhaps get no further.

Hospital Sunday.

The amount collected at the various churches and chapels on Feb. 10th.—Hospital Sunday—has not yet been publicly announced. It is stated that the various hospitals of Manchester and Salford had last year an aggregate deficit of £12,310. Still their work increases and some of them, rather than curtail it, are driven deeper into debt. In addition to the increased calls on the people in connexion with war and famine, which have no doubt diverted money that might have gone towards the support of the hospitals, another factor in the case has been the higher cost of coals and provisions, which has made hospital expenses heavier. The need, therefore, for large collections is manifest, but the experience of past years is not encouraging. In 1874 a sum of £6248 was collected, while last year it was only £3893. If all attending the various places of worship gave a trifle a larger sum than this should be obtained. But what is done by the great multitude who do not go to church?

Hospital for Skin Disease.

At the annual meeting of the Manchester and Salford Hospital for Skin Diseases held on Feb. 8th it was announced that a room was being built where the "light" treatment for skin diseases can be carried out. Towards this object the chairman, Mr. W. C. Jones, promised to defray the cost of the building and the necessary instruments to the extent of £500. Dr. H. G. Brooke visited Copenhagen last summer and was very favourably impressed by the excellent results of this treatment in the hands of Professor Finsen.

More Bacteria Beds.

The Rivers Committee of the Manchester City Council have resolved to extend their experiments with the bacteriological method of treating the sewage of the city. Hitherto they have had at Davyhulme two beds of half an acre each. They are now going to construct ten half-acre beds, which may be taken to mean that the two experimental beds have done their work satisfactorily. By gradually extending the bacterial beds the committee will be able to "test the efficiency of the system ere they commit the work absolutely to it." It is calculated that to deal with the whole of the sewage 46 acres of beds will be required. In the meantime this method is carried on alongside the chemical precipitation method, which has been in use for some years.

Typhus Fever in Ancoats.

At the meeting of the Manchester City Council on Feb. 6th Councillor Dr. C. H. Braddon moved the reception of a report from the medical officer of health respecting the recent outbreak of typhus fever in Ancoats. He gave an interesting sketch of a severe outbreak of the disease in the winter of 1862–3 when he had charge of the Workhouse Hospital in Bridge-street, together with the Fever Hospital near Strangeways. Since that time he had not seen a case of typhus fever and "he believed that few medical men of the present generation had seen a case of real typhus." During that epidemic the late Sir William Roberts had a severe attack of the disease and nearly lost his life. Dr. Braddon said that care had been taken to disinfect every house in which the disease had been found, and beside the cases in hospital between 20 and 30 individuals were isolated at Clayton, where they were kept in quarantine. "The epidemic seemed likely to afford another instance of the vast importance of the sanitary powers which were exercised by local authorities in these days." In one house a man and two children were found "down with typhus," the wife having been previously taken to the hospital. Both parents died. The chairman of the sanitary committee said that the medical officer found the house locked and got in through the window, and that "the action of the medical officer of health in connexion with the outbreak was worthy of the highest praise."

Memorial to the late Professor Tom Jones.

The amount promised towards the memorial to the late Professor Tom Jones is already over £600. There has been no systematic canvassing, as it is desired that all donations should be the result of the personal wish of the givers to share in this tribute to the memory of a valued and lamented friend. The form of the memorial cannot be determined till the amount of the fund is known, but it may probably be decided that an exhibition or prize will be the most fitting mode of commemorating the work to which he devoted his life.

Feb. 19th.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Precautions against Plague.

AT a meeting of the West of England and South Wales branch of the Incorporated Society of Medical Officers of Health held at Newport on Feb. 14th the area of the branch was defined to include the counties of Hereford, Gloucester, Somerset, Monmouth, Devon, Cornwall, the northern portion of Wiltshire, and the six South Wales counties. The next meeting of the branch will be held at Plymouth on April 11th. Dr. Edward Walford of Cardiff introduced a discussion upon the desirability of uniformity of action by port sanitary authorities with respect to methods of dealing with cholera, yellow fever, and plague under the Local Government Board order of Nov. 9th, 1896. In the course of this discussion it was made apparent that the only means of ascertaining which foreign ports were infected was by a careful study of the columns of the daily papers and that each port medical officer of health made out day by day his own list of infected ports and was guided by this list in deciding which vessels should come under the Board's regulations. Dr. D. S. Davies of Bristol pointed out that the plague regulations of 1896 were practically the cholera regulations of 1892, and that whereas cholera is a human disease the infection of plague may be transmitted by rats or fleas, and that although a ship may have left an infected port a considerable time beyond the incubation period of plague in the human being, yet there may still be danger from rat infection when the cargo is discharged. At Bristol every vessel from an infected port is kept 10 feet from the wharf, planks to the vessel are all taken up at night, and the ropes connecting the ship to the wharf are guarded with thin iron collars. At the close of the discussion it was resolved to request the council of the society to represent at an early date to the Local Government Board the urgent necessity for a revision of the existing plague regulations in view of the special characteristics of plague, the method of its spread and introduction by infected animals, and the possible spread of the disease from one home port to another. Dr. J. Howard-Jones of Newport and Dr. W. H. Symons of Bath, at the close of the meeting gave very instructive details of the card system of tabulating statistics and general information which they have each had in operation for some time.

Isolation Hospital Accommodation in Carmarthenshire.

The county of Carmarthenshire is very ill provided with the means of isolating cases of infectious disease. Apparently there is no fever hospital in the entire county, which has an area of nearly 600,000 acres and a population of 150,000 people. The house committee of the Carmarthenshire Infirmary have drawn the attention of the Carmarthen Town Council to the importance of establishing a suitable hospital for the borough and at the last meeting of the council the medical officer of health and the borough surveyor were asked to report upon the whole question. As there is a population in the county

town of only a little over 10,000 persons it seems a pity that a scheme for the whole county, or at any rate for those districts immediately surrounding Carmarthen, should not be formulated.

Cardiff Police Surgeons.

For nearly 20 years Dr. Thomas Wallace has held the post of police surgeon to the Cardiff Corporation and, as already stated in this column on Jan. 26th, the watch committee recently decided to appoint three surgeons, allotting to each one a separate district. On Feb. 18th Dr. James Joseph Buist was elected to the central division, Mr. Marmaduke Pittard to the Grangetown division, and Mr. J. Llewellyn Treharne to the Roath division. Mr. Treharne, who is the surgeon to the prison at Cardiff, was elected chief surgeon and will be required to examine recruits, lunatics, &c. Dr. Wallace was a candidate for the central division. The duties of the police surgeons include attendance upon the constables and firemen at a fee of 4*s.* 6*d.* per annum for each man, a sum which is considered by many medical men in Cardiff to be quite inadequate to the services rendered.

Deaths under Chloroform.

Two deaths occurred in South Wales recently during the administration of chloroform. On Feb. 12th a married woman at Swansea, who was about to be operated upon at her own house for varicose veins, died under the anæsthetic, and on Feb. 15th a girl, 15 years of age, died under similar circumstances at the Cardiff Infirmary, where she had been attending as an out-patient. She had come on that day from her home to have her tonsils excised. In the latter case, although there were attempts at vomiting at the beginning of the administration of the anæsthetic, there was found on post-mortem examination to be no food in the stomach, and the other organs were in a normal condition.

Queen Victoria Convalescent Home, Bristol.

The convalescent home at Bristol, which was opened in November, 1899, by Queen Victoria and which was intended primarily to relieve the wards of the Royal Infirmary and of the General Hospital, has never, owing to lack of funds, been fully occupied. The treasurer of the home, Mr. P. Vaughan, has therefore offered to contribute the sum of £10,000 conditional upon an additional £20,000 being raised by the end of March next, and it is anticipated that this amount will enable the governors to make the fullest use of the institution. The citizens of Bristol are so noted for their philanthropy that there ought not to be any doubt as to the fulfilment of Mr. Vaughan's munificent offer.

Bath Eye Infirmary.

The annual meeting of the subscribers of the Bath Eye Infirmary was held on Feb. 11th. The medical report showed that the in-patients numbered 282, as compared with 268 in 1899, and that there were 2047 out-patients as against 2117 in the preceding year. The average period of residence of each in-patient was 12 days, and the daily cost for maintenance was 8¼*d.* The financial statement showed a favourable balance. The best thanks of the committee were awarded to Mr. W. M. Beaumont, the honorary medical officer.

Taunton and Somerset Hospital.

The annual meeting of the governors of the Taunton and Somerset Hospital was held on Feb. 14th, under the presidency of Mr. H. J. Badcock, J.P. The medical report stated that 846 in-patients had been admitted against 824 in the previous year. The daily average number of in-patients was 84·6 and the average duration of their stay was 32·7 days. The out-patients numbered 4191, as compared with 3968 in 1899. The President reminded the subscribers that the King was a life governor of the institution by virtue of a considerable contribution which His Majesty, when Prince of Wales, gave towards the Victoria Jubilee Nursing Institute in connexion with the hospital.

Conference upon Housing Reform.

One of the most gratifying features of the present agitation in favour of improved housing accommodation for the working classes is the activity which is being displayed in the direction of improvement by the leaders of the working classes themselves. On Feb. 16th a conference consisting of 191 representatives of trades unions and similar organisations was held at Bristol to consider what practical steps could be taken to secure housing reform in the west of England and south Wales. The members of the conference were drawn from an area extending from Swansea to Swindon and from Cheltenham to Exeter. Mr. W. Thompson, a member of the Richmond (Surrey) Town Council, gave an account of the municipal cottage dwellings which have been erected in Richmond. The Bristol corporation are now building 34 cottage houses, but it is not anticipated that the rentals received from them will, as at Richmond, be sufficient to pay the interest and repayments upon the capital outlay. All the speakers at the conference who were at all conversant with the subject urged the desirability of increasing the period for the repayment of loans contracted under Part III. of the Housing of the Working Classes Act, 1890, to at least 60 years.

Feb. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Preparations for a Small-pox Epidemic in Edinburgh.

EDINBURGH as yet presents a clean bill of health as far as small-pox is concerned. The public health authorities, however, have issued a circular to the medical men in the town recommending a general revaccination. They undertake to supply lymph to medical men free of charge, and to make an allowance of 2*s.* for every person successfully vaccinated. Cases of small-pox continue to occur in various towns near Glasgow. A few fresh cases have appeared in Dundee. The medical officer of health of Aberdeen reports to the town council that in the past month four cases of small-pox occurred within the city. The first two cases had been infected in Glasgow, and these led to the infection of two other cases. One was the case of a porter in the service of the sanitary department who, being only temporarily employed, had not been revaccinated, but who in the absence of the greater number of the staff on New Years' Day at the time of admission of the first case had inadvertently been permitted to assist in the removal of the infected clothing. The other case was that of an unvaccinated child in the hospital who lay in the scarlet fever ward nearest the small-pox pavilion, the ward and the pavilion being separated by from 40 to 50 yards of open space. This case appeared to have originated by aerial infection. In acknowledging the receipt of the report on this case the Local Government Board stated "that it seems to the Board to point to the necessity of entire structural and administrative severance of the treatment of small-pox from that of any other disease." The hospital authorities are advised that even substantial barricades, cutting off all communication or intercourse between pavilions in the same enclosure used for other diseases and pavilions used for small-pox in bulk, with complete administrative adjuncts and staff attached, do not prevent the invasion of small-pox.

Glasgow University.

The February meeting of the University Court was largely occupied by a discussion on the form in which the University accounts have been kept and presented. At a previous meeting Dr. D. C. McVail had adversely criticised the manner of keeping the accounts and had insisted that this was not in accordance with the terms of the legal ordinance. As a consequence the whole matter was remitted to the Finance Committee, which at the current meeting reported that "the accounts are in order and in proper form." The court adopted this decision though Dr. McVail maintained his position and entered his dissent. He took the same position in reference to a proposal to erect a room for the accommodation of students in the cloisters. The Finance Committee reported against this suggestion on the ground of the expense and the court agreed to their recommendation, Dr. McVail again dissenting.—The celebration of the ninth jubilee of the University which is to be held in June next is causing much activity in academic circles, and elaborate arrangements are being made to make the various ceremonies worthy of the event. A large number of representatives from home and foreign universities and scientific corporations have been invited, and the occasion is likely to be one of much interest. The fact that the International Exhibition is also to be held during the summer will make the city specially attractive for visitors.—The free lectures have been continued during the season and have as before secured large audiences.

University of St. Andrews.

The University Court has made the following appointments: Dr. Robert Thornton to be assistant in the department of medical jurisprudence and public health in the place

of Dr. Robert Mowat who has resigned; Mr. Sydney A. Kay, B.Sc., to be lecturer on chemistry; and Mr. R. C. Punett, B.A., to be lecturer on natural history. At the spring graduation ceremony the University is to follow the precedent recently established by the University of Edinburgh, the Senate having intimated its intention to confer the honorary degree of LL.D. upon two members of the gentler sex.

Handsome Gifts to Hospitals.

Mr. G. J. Kidston of the Clyde Shipping Company has given a donation of £5000 to the Glasgow Royal Infirmary, £5000 to the Western Infirmary, and £2500 to the Victoria Infirmary. These handsome sums are specially opportune at a time when, in common with other charities, the infirmaries are feeling the financial strain induced by the claims arising out of the South African war.

Small pox in Glasgow.

The official bulletin issued on Feb. 18th leaves 387 persons under treatment in hospital. This is a reduction of 49 on the previous week's statement. New cases, however, continue to be admitted, but the dismissals far more than compensate for these. The new cases, too, show a diminishing rate, though the total is still considerable. During the fortnight ending Feb. 16th the admissions numbered 202, as compared with 350 during the previous fortnight. In his last report Dr. A. K. Chalmers announces that a careful record of the condition of the vaccination mark in all patients is being kept, and that the results will be dealt with in a subsequent report. The observations, it is satisfactory to know, are being made and recorded with critical minuteness, so that instead of a rough classification of "vaccinated" and "unvaccinated" details will be given of the size and character of the scar, the age of the patient, the severity of the attack, and the interval between its occurrence and the date of vaccination. An analysis of the small-pox records of the city during the last decade has recently been made by Dr. Robert S. Thomson. Dealing with the area of the vaccination scar in relation to the degree of protection afforded by the operation, it is shown that of all cases of small-pox occurring which presented a scar area of less than a quarter of a square inch 84 per cent. were discrete in type, but of those presenting over half a square inch of scar area 97 per cent. were of this character. In the first-class 14·6 per cent. of the patients died, while of the second only 1·6 per cent. were fatal cases. As to the value of revaccination, the experience of the small-pox hospital during the 10 years under review is very striking. In that time 595 persons not suffering from the disease were, by reason of their duties or for educational purposes, brought into contact with infection in the wards of the hospital, but not one who had been successfully revaccinated contracted the disease. The same truth is illustrated by the age distribution of the disease in the cases occurring during the past fortnight, which show that it is mainly on persons from 25 to 35 years of age that the incidence of the disease falls. 14 only of the 202 cases were in children under 10 years, and of these 11 were unvaccinated, six being babes varying in age from two weeks to seven months. All six were unvaccinated and five died, as did also an unvaccinated girl of two years. The age of the other unvaccinated children ranged from four to seven years. Of the three children who presented evidence of primary vaccination all were between six and eight years of age and the eruption in each case was sparse in quantity, although in all the vaccination mark was unsatisfactory, either by reason of the small size of the scar area or from absence of characteristic pitting of the surface. Of the deaths which occurred during the fortnight 17 were in unvaccinated persons; in two there was no evidence of vaccination though it was alleged to have been performed in infancy; and in four the marks were ill-defined. The deaths occurring among vaccinated persons were as follows: under 30 years of age, two; under 35 years, two; under 40 years, six; under 55 years, two; and under 70 years, one. It is not stated whether in these cases revaccination had been performed.

Founders' Day at the University of Aberdeen.

In former times it was the custom of King's College to celebrate its founders' day, and sometimes the celebration was conjoined with the graduation ceremony. It is proposed by the Senatus of Aberdeen University to revive this laudable practice, but to give it a wider application. While the Colleges are two the University is one. It seems specially fitting therefore that Bishop Elphinstone and the Earl Marischal should be commemorated together. It is further the desire of the Senatus that the occasion be used as a great opportunity for bringing together graduates and alumni of the University from different parts of the country, as well as those from foreign lands who happen to be at home on furlough. The Senatus, accordingly, has resolved to celebrate the Founders' Day this year in the beginning of April, at the time of the graduation ceremony. The arrangements, which are being carried out by a committee of Senatus, contemplate the following: (1) a dinner (not exceeding, in expense, 7*s.* 6*d.* per head), open to all graduates and alumni, to be held on the evening immediately preceding the graduation ceremony—viz., Monday, April 8th; (2) a commemoration service in the University Chapel, on Graduation Day, at 10 A.M.; (3) the graduation ceremony in the Mitchell Hall, Marischal College, at 12 o'clock noon; (4) an evening reception in the same hall and adjoining rooms by invitation of the Senatus. The committee will feel obliged if those intending to be present will intimate the same, as early as possible, to Mr. D. R. Thom, secretary to the Senatus.

Feb. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Consultant Surgeons' Opinions on the War.

SIR WILLIAM THOMSON recently delivered a lecture at the Royal Dublin Society entitled "Dublin to Pretoria with the Irish Hospital." The lecture was very largely attended and evoked much interest. Sir William Thomson has kindly consented to repeat it at the Round Room, Rotunda, on Tuesday, Feb. 26th. Dr. Kendal Franks also recounted his experiences of the war at the annual meeting of the St. Patrick's Nurses' Home on Feb. 8th, when the chair was filled by his Grace the Archbishop, her Excellency the Countess Cadogan being present. As consulting surgeon to the forces in South Africa Dr. Franks furnished many interesting particulars about the war and strongly criticised the strictures of Mr. Burdett-Coutts on the hospital arrangements. He said that Lord Roberts on noticing them asked that a commission should be appointed at once to inquire into the matter. That commission included a set of men as entirely unprejudiced and impartial as it would be possible to obtain. The final paragraph of their report stated that there had been no breakdown in the hospital arrangements and that in no campaign had the sick and wounded been so well looked after. He thought that Mr. Burdett-Coutts's statements acquired more importance than they would otherwise have done from the fact that he bore a name which was synonymous with philanthropy, while, in fact, he "never moved a finger to relieve the sufferings he described." Dr. Franks went on to praise in strong terms the devotion and self-sacrifice of the medical men and nurses, whose conduct was, as he said, "simply splendid." His speech will well repay perusal and his allusions to the fortitude of the soldiers, reported in all the papers here, will be noted with interest and gratitude in a city and country where Dr. Franks made himself long ago well known and appreciated.

A Central Pathological Laboratory for Ireland.

In reference to the influential meeting and recommendation for a central pathological laboratory in connexion with the Lunatic Asylums of Ireland reported in THE LANCET of Feb. 9th it is satisfactory to note that the Dublin University Biological Association has proved active. In reply to a resolution, "That in the opinion of the Dublin University Biological Association it is desirable to establish a central laboratory for the Irish asylums devoted to the study of pathology in relation to nerves and mental disease," Sir D. Harrel, K.C.B., K.C.V.O., the under secretary to the Lord Lieutenant, by direction of His Excellency, wrote in acknowledgment of their letter and resolution.

Irish Memorial to the Queen.

A very large and representative meeting of the citizens of Dublin took place at the Mansion House on Feb. 17th, when a motion was proposed by the Lord Chief Justice and seconded by the Governor of the Bank of Ireland sympathising with the King on his irreparable loss by the death of the Queen. The motion was supported in eloquent speeches by Sir Christopher Nixon, the President of the

Royal College of Physicians of Ireland, and by Mr. T. Myles, President of the Royal College of Surgeons in Ireland.

Personation at Examinations.

A curious question has recently been referred to the Court for Crown Cases Reserved by Mr. Justice Kenny. A man was indicted at the Dublin Commission on Feb. 9th and charged with having fraudulently personated Robert F. Cooper at the preliminary examination of the Royal College of Physicians and Surgeons held on March 13th and 14th last. The jury found the accused guilty on the facts, but Mr. Bustie, K.C., raised the curious point that the prisoner has committed no offence known to the law. The case was then adjourned until the next Commission in April, and in the meantime the traverser was allowed to stand out on bail.

The Lurgan Workhouse Hospital.

As a result of an inquiry held by their inspector into certain charges preferred against nurses of the Lurgan Workhouse Hospital the Local Government Board have written to the guardians that in the particular case referred to (a child suffering from scarlet fever) Dr. J. S. Darling, the medical officer, was most attentive to the patient. They attribute any imperfection in the nursing and attendance to the fact that Dr. Darling's recommendations as to the strengthening of the medical and nursing staff were not adopted by the guardians. They say that neither of the nurses against whom complaints were made can, in the circumstances, be held responsible for any neglect or inattention. The Local Government Board say that the guardians do not appear to attach sufficient weight to the fact that the Lurgan Union Infirmary and fever hospitals are almost the only available hospitals for the ordinary surgical and medical cases of the important and increasing towns of Lurgan and Portadown, and therefore the requirements of an ordinary Poor-law infirmary and fever hospital are very far from being sufficient for the union of Lurgan. The guardians are accordingly requested to ask the medical officer to furnish a full report of what is requisite, in his opinion, for the adequate equipment of their infirmary and fever hospital, having regard to the important medical and surgical cases that are treated therein. Dr. Darling is to furnish his report to a committee and afterwards it is to be considered by a full meeting of the guardians.

Co. Down District Lunatic Asylum.

From a memorandum of the Government Inspector of Lunacy, Sir G. P. O'Farrell, I find he expresses approval of the treatment of the patients and of the general administration of the above institution. The medical officers are all warmly praised. The condition of the asylum as a whole must be considered very satisfactory, and as a proof that every care and economy were exercised in dealing with the funds of the institution it may be pointed out that notwithstanding the many improvements in the buildings and surroundings of the patients the actual capitation cost of maintenance is considerably less than it was 30 years ago.

Bazaar in the Students' Union, Queen's College, Belfast.

An entertainment took place in the Students' Union, Queen's College, Belfast, on Feb. 13th and 14th. It was organised and managed by the students, their aim being to get rid of a debt incurred in the working of the union. There were a bazaar and various side-shows and variety entertainments, and as a result the Students' Union is completely out of debt. It is hoped that with careful management further liabilities will not again occur. The union should be self-supporting.

Ulster Medical Society.

The fourth annual meeting of this society was held in the Museum, Belfast, on Feb. 14th, Professor W. H. Thompson, the President, being in the chair.—Dr. A Fullerton showed a boy, aged six years, who, either as the result of injury received during his birth or from a subsequent epiphysitis had a Congenital Dislocation of the Right Hip. A radiogram of the affected parts was also shown.—Dr. Robert Campbell showed a child from whom two years previously he had Excised a very Large Occipital Cephalocele. A photograph of the original condition of the infant was also exhibited. Dr. Campbell also presented a radiogram of a case of Coxa Vara.—Dr. T. S. Kirk showed a Ruptured Kidney excised successfully from a boy in whom the accident occurred as the result of a fall from a ladder. He also gave a demonstration of a New Method of Wiring Oblique Fractures. By means of a rod of whalebone a piece of wire was slipped round the ends of the broken bone and tied in a clove-hitch.—Professor J. W. Byers showed two Ovarian Tumours successfully removed; one was a large unilocular cyst (which contained 12 pints of fluid) which simulated hydramnios, and the other was a very large universally adherent multilocular ovarian adenoma. The tumour had become so rotated that the part presenting when the peritoneal cavity was opened was the right broad ligament and tube covered with fresh lymph.—Dr. W. D. Donnan showed a Fœtus of an early date.—Professor J. A. Lindsay showed a specimen of Cancer of the Root of the Lungs. Professor J. A. Lindsay read a paper upon Rare Cases of Pulmonary Disease, including (1) three illustrative cases of malignant disease of the lungs (one with purulent infiltration, a second which simulated phthisis, and a third with very obscure physical signs); (2) a case of pyo-pneumothorax; (3) a case of bronchopleural fistula; (4) a case of plastic bronchitis; (5) a case of double pneumonia with delay of crisis to the twentieth day; and (6) a case of phthisis where signs and symptoms disappeared for seven years and then recurred.—In the subsequent discussion the following took part: Professor W. Whitla, Dr. P. Redfern, Dr. J. S. Morrow, Mr. R. Hall, Dr. R. W. Leslie, Dr. W. Calwell, Dr. D. M'Donnell, Professor Sinclair, and Professor Byers.

Curious Prosecution under the Public Health Act.

Last week the sanitary authority at Cork applied for an order at the police-court for the removal of the body of a child to the morgue and for its burial within three hours. The circumstances of the case were remarkable. The child had died a week previously and the body lay coffined in the room occupied by the mother who was ill. The father of the child is a soldier serving out in South Africa, and, despite the protestations of her friends, the unfortunate mother declined to allow their little one to be buried, and signified her intention to keep the coffin in the room till the father returned in order that he might have the satisfaction of seeing his dead child. The magistrates granted the order sought and the interment was duly carried out.

Feb. 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Paris.

ALTHOUGH the recent epidemic of small-pox in Paris, which was caused in the main by the influx of strangers for the Exhibition, is not such a general object of conversation as formerly, yet it must not be considered as being at an end. During the last week of January there were registered 12 deaths from small-pox, while 84 fresh cases were notified by the medical officer belonging to the health department of the Prefecture. These medical men are far from strict in notifying cases, for although such notifications may be useful they are afraid of displeasing fidgety patients. In the last week but one of January there were only six deaths notified. It is the duty of everyone to be revaccinated if it has not been already done, but now that the scare has passed people are getting very careless, and to escape this little operation they vie with one another in finding out reasons to show its uselessness. Among domestic servants, for instance, the objection is simply unreasoning pigheadedness; among masters and mistresses it either takes the form of smiling scepticism, or they say, "I was revaccinated so many years ago; I have had small-pox." At a meeting of the Academy of Medicine the venerable M. Hervieux opened an important debate on the question and showed very clearly that the matter of revaccination should be vigorously pushed, that the immunity conferred by a former revaccination lasts but for an uncertain period, and that even an attack of small-pox, contrary to the generally received opinion, is not an absolute protection. Certainly it is very uncommon to find persons who have had small-pox twice, but a certain number are known besides the classical instances such as that of the Milan hospital attendant who had four attacks. During an epidemic, in M. Hervieux's view, even those who have had small-pox should be vaccinated. While upon this point M. Hervieux thought it well to protest strongly against the popular and not altogether

disinterested opinion that the lymph supplied gratuitously by the Academy of Medicine and collected under special surveillance of a committee appointed for the purpose, was inert. M. Empis associated himself with this protest and expressed regret that the obloquy thrown upon the lymph of the Academy should have been echoed even in some medical journals. Speaking for himself he had performed 200 revaccinations with this lymph and had only failed in the case of certain adults doubtless because they were already immune from a previous vaccination. M. Kelsch declared that the value of a vaccine could not be estimated from one series of vaccinations, as success depended upon so many different factors. An identical vaccine taken at Val de Grâce had given in the hands of one operator 7 per cent. of successes and in the hands of another operator 50 per cent. Finally, on the motion of M. Colin the Academy decided to distribute a new appeal among the population of Paris to impress them with the urgent necessity of submitting to revaccination.

Tokelau.

M. Jeanselme has sent from Indo-China a very interesting report upon "tokelau," a disease of the skin peculiar to the East, which is widely spread and which is characterised in addition to itching and the formation of desquamating patches of a dirty-yellow colour, by the appearance of curious patterns of a geometrical regularity. These patterns take the shape of intersecting circles which cover the patient with all kinds of bizarre designs. Tokelau only grows on the naked skin and does not affect the hairy skin. According to M. Jeanselme the disease is due, not as was formerly supposed to a trychophytosis of the tinea imbricata type, but to an aspergillosis. There is an abundant mycelial network to be found in the scales of tokelau, producing sporiferous branches of a yellow colour which give rise to the pale-coloured patterns so characteristic of this disease.

"Stomatite Erucique."

At the recent meeting of the Society of Biology M. Artault gave an account of a curious form of stomatitis which he proposed to call "stomatite erucique," the origin of which had been hitherto unknown. It is, however, now known to be caused by eating fruits which have been in contact with the nests of certain caterpillars possessing an urticating property. The inflammation attacks the mucous membrane of the mouth, the lips, the gums, the cheeks, and the palate. The cause is the irritating hairs and secretions which the caterpillars leave in their nests. The disease, as a rule, attacks children who eat fruits which are taken into the mouth whole, such as cherries and gooseberries, and it is hardly ever seen except during the months of May and June, especially in dry years. A mouth-wash composed of tincture of "myrtille"[1] generally cures the complaint very easily.

Glycosuria and Dyspeptic Diabetes.

A very notable event was the reading of a paper before the Academy of Medicine by M. Albert Robin upon dyspeptic diabetes. The beautiful researches in applied clinical chemistry at which M. Robin has worked for so many years have upset all preconceived ideas in the pathogeny of gastric chemistry, in which department up to now the ideas of Germain Sée and of Bouchard have reigned supreme. The researches of M. Robin have made known to us a special form of glycosuria depending upon a reflex excitation of the liver by the arrival in the intestines of a very acid gastric product of digestion. This renders the biliary secretion much more active and increases the formation of sugar. What is very important is that this form of diabetes is absolutely curable, for as it depends upon a fault of digestion it suffices to get rid of this fault to cure glycosuria. Simple glycosuria is found in 5 per cent. of cases of hypersthenic dyspepsia. It takes an irregular form and is always slight, the quantity of sugar varying from 50 centigrammes to six grammes per litre; it is found in the urine of digestion but is absent from that of fasting, and sometimes it is found in company with the albuminuria of digestion. In these patients nutrition is marked by an exaggeration of exchanges, by a deficient assimilation of nitrogen, and by an over-excitement of the nervous system. The stomach is often distended, the liver hypertrophied, and there is also a condition of hyperchlorhydria. The patients suffer from vertigo, phosphaturia, and various skin affections, such as hyperidrosis. There are, in addition, affections of sight and hearing. Glycosuria may be either consecutive or previous to dyspepsia. This distinction is important, for dyspeptic diabetes can be cured by treating the dyspepsia, whereas ordinary diabetes resists all treatment. Diabetes is not a disease characterised by a slowness of nutrition, but rather by a too quick performance of nutrition and a hyperaction of the liver. Medicines which excite nutrition aggravate diabetes, while medicines which diminish nutrition improve the diabetes. Glycosuria always points to over-activity of the liver. It bears a definite relation to hypersthenic dyspepsia. Over-excitation of the liver, at first occasional, becomes permanent and so a real diabetes of gastric origin is set up. Dyspeptic glycosuria can be cured by treatment of the dyspepsia, the administration of alkalies after meals being generally sufficient. In more severe cases a strict milk diet is advisable, although this diet is harmful in cases of true diabetes. When dyspeptic diabetes is established the sugar in the diet must first be reduced and then the treatment of the dyspepsia undertaken.

Three New Hospitals.

The buildings and interior fittings of three new hospitals—respectively in the Rue Etex, the Rue Michel Bizot, and the Place Danube—are finished. The opening will take place about April 1st. The three hospitals are for sick children and will take the place of the old Trousseau Hospital in the Faubourg Saint-Antoine. The one in the Rue Etex is the Bretonneau Hospital and will contain 60 medical beds, 74 surgical beds, 84 beds for infectious cases, and 16 beds for cases in which the diagnosis is uncertain. The members of the staff are Dr. Seveste, Dr. Josias, and Dr. Felizet. The building in the Rue Michel Bizot is the new Trousseau Hospital. The beds are allotted as in the Bretonneau Hospital, with the exception that those for doubtful cases will number 19 instead of 16. The staff are Dr. Netter, Dr. Louis Guinon, and Dr. Kirmisson. The third building, in the Place Danube, is the new Herold Hospital, the staff of which are Dr. Barbier, Dr. Jeanselme, and Dr. Albarran. Here there are 56 medical beds, 64 surgical beds, 84 beds for infectious cases, and 16 beds for doubtful cases. All three buildings are erected and fitted according to the very latest demands of modern hygiene. Although not strictly speaking a new hospital I may mention that the Hertford Hospital has just been formally reopened. Founded in 1871 by the late Sir Richard Wallace it was for many years under the management of a committee appointed by him. In 1891 he offered it to the British Government and at the same time promised to endow it. His death took place before the transfer could be carried out. Lady Wallace, however, carried out her husband's wishes and provided the necessary endowment. The transfer was formally effected last year and a committee was appointed for its management. This committee considered it necessary that the building should be repaired and altered in order to bring it up to modern sanitary requirements, and it was accordingly closed in August, 1900. The opening took place on Feb. 18th, the Hon. Michael Herbert (chairman of the committee) and Mr. H. Austin Lee (of the British Embassy) receiving the guests on behalf of the Ambassador, Sir E. Monson, who was unfortunately prevented by illness from being present.

Feb. 19th.

[1] Myrtille is the vaccinium myrtillus or blaeberry, not the common myrtle which is "myrte."

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

The Blind in Switzerland

STATISTICS on the blind are few and far between in this country and therefore the report which Dr. Laurenz Paly of Entlebuch publishes on the subject is of value. The number in 1895 amounted to 2107 persons, of whom 1783 had undergone a medical examination; in 1870 the number was 2032, or a percentage of 0·072 of the population, compared with a percentage of 0·076 in 1895. The comparative number of males and females were 52·6 to 47·4 in 1895. Dr. Paly divides the blind into the four following classes (I put the percentage in parentheses): (1) Visus = 0, absolute amaurosis (57·7 per cent.); (2) visus = $\frac{1}{6}$, distinguishing light and darkness (24·2 per cent.); (3) able to count fingers at 0·3 metre or about one English foot (10·4 per cent.); and (4) able to count fingers at one metre (5·1 per cent.). In 2·4 per cent. the examination failed to give the necessary details. In a percentage of 6·8 of the cases

blindness was congenital, in 93·2 it was acquired. Of these, 66·9 per cent. could be referred to primary disease of the eye, 12·7 per cent. to traumatic influences, and 13·5 per cent. to general diseases.

The Therapeutics of Urotropine.

Dr. F. Suter of Basle reports on his experiences with urotropine, which was originally recommended by Nicolaier for vesical catarrh. It is an antiseptic compound produced by the action of formaldehyde on ammonia; it is easily soluble in water and ought to be taken on an empty stomach, as the acid reaction of the stomach decomposes it rapidly, when part is absorbed and part excreted in the urine. It slowly decomposes in the bladder only in urine of acid reaction, not in neutral or alkaline. It decomposes perhaps more rapidly in the kidneys, as it acts very promptly in cases of alkaline decomposition of the contents of the bladder. Five or 10 milligrammes of formaldehyde have the same action on three ounces of urine as half a gramme of urotropine, and yet experiments and clinical use prove its antiseptic action even in these small doses. The action on different bacteria varies but a little; bacilli coli communis and streptococci seem most resistant. Dr. Suter made experiments with the following medicines administered at night whilst the urine passed first in the morning was examined: benzoic acid 10 grains, boric acid 15 grains, salol 15 grains and 45 grains, and urotropine 15 grains. The development of decomposition was retarded by several days only by the strong dose of salol and by urotropine. Its efficacy being thus proved its high cost is to be regretted, for this limits its exhibition. It is to be recommended in cases of surgical interference (even catheterism); in bacteriuria, especially after enteric fever, where it occurs in from 20 to 30 per cent. of all cases; and in cystitis, as an aid to local treatment, which often is necessary. It is of little value in pyonephritis, gonorrhœal cystitis, or tuberculosis of the kidney; it is no panacea for all cases of cystitis, but acts best in ammonia decomposition. It should also be used in disease of the prostate gland with residuary urine and cases of stricture with partial retention, where it is a decided improvement on salol. Doses of from 15 to 25 grains per diem can be given for weeks in succession. Such are Dr. Suter's conclusions.

Attendance at Swiss Universities.

The number of medical students is decidedly on the increase without any obvious reason in the way of demand. The number of medical students for the winter term 1900–1901 amounts to 1375 thus distributed among the separate universities: Basle 145, Bern 388, Geneva 357, Lausanne 183, and Zürich 302. The number of women studying medicine in Switzerland has greatly increased, especially of foreign women. Of these the Russian female students are the most numerous, comprising 47 per cent. of the whole. Only 21 are of Swiss nationality.

Zürich, Feb. 13th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

The Death of the Queen.

WHEN the news arrived in Canada that the Queen was no more it came to the medical colleges in the midst of lectures which were immediately stopped. On the afternoon of Feb 2nd a students' parade took place in Montreal from McGill College to the Queen's statue, headed by four students bearing on their shoulders a large cushion of natural carnations in the form of the Star of the Order of the Garter which was deposited at the feet of the statue. The entire medical faculty accompanied them.

Blindness decreasing in Ontario.

The annual reports upon the Ontario Institutions for the education of the Deaf and Dumb at Belleville and of the Blind at Brantford have just been published. They cover the year ending Sept. 30th, 1900. At the Institution for the Deaf and Dumb the number of pupils in attendance was 152 males and 130 females, a total of 282, which is about the average in recent years. Since the establishment of this institution 30 years ago 1187 children have been treated. At the Institution for the Blind there were 113 pupils in attendance, 61 males and 52 females, which number was less than for the preceding year. Referring to the causes which led to the decrease Principal Dymond attributed it to the eye infirmary attached to almost every hospital in the province, thus affording a means of easy and inexpensive relief. He thinks that the eyesight of one-fourth of the young people under his charge might have been saved had prompt precautions been taken in infancy and treatment by a skilled oculist been then secured at one of these infirmaries. Greater watchfulness on the part of the immigration officials is also a contributing feature to the decrease.

New Scholarship at Queen's College, Kingston.

The medical faculty of Queen's College have decided to found a new scholarship in medicine in commemoration of Dr. Fife Fowler, dean of the faculty, who recently retired from the professorship of medicine and who for more than 46 years has been in active work in the service of the college. This scholarship will be known as the Dean Fowler Scholarship, and the sum of $10 000 will be immediately raised amongst the graduates of Queen's College throughout the United States and Canada. The medical faculty have already amongst themselves contributed a good sum. In addition to this the faculty are further raising amongst themselves $10,000, which will be expended in enlarging and extending the medical buildings of Queen's College. To this sum no outsider will be asked to contribute.

The late Dr. C. W. Purdy.

Canada and Queen's have recently lost a distinguished son by the death of Dr. Charles W. Purdy, a well-known authority on uranalysis and urinary diagnosis. He was born at Collins Bay, Frontenac County, Ontario, on June 18th, 1846. His literary course was taken out at Victoria College, then situated at Coburg, and his medical degree was received from Queen's in 1866. He practised in the county of Hastings for a year when he moved to Chicago. His alma mater conferred upon him a Fellowship and the degree of LL.D.

The Death-rate of Montreal for 1900.

There were 7351 deaths in Montreal in the year 1900. This was the largest number which has been recorded since 1885, when 7825 deaths occurred; but since that year the city has taken a big leap in population. In 1885 the death-rate per 1000 was 4691 and in 1900 it was 25·47. In other recent years the rate was as follows:—1894, 27·27; 1895, 24·81; 1896, 21·92; 1897, 22·48; 1898, 20·66; and 1899, 24·51.

The Victorian Order of Nurses.

The executive council of the board of governors of the Victorian Order of Nurses recently met in the city of Ottawa, Her Excellency the Countess of Minto and the Countess of Antrim being present. Miss McLeod, the superintendent, presented her monthly report. In Montreal four of the six nurses had been on duty during the month of December and 43 patients had been attended by them. They paid 570 visits and received $96 in fees. At present there are 38 nurses in the Victorian Order in Canada. They have to serve six months on trial before being finally accepted and they receive $15 per month for that time.

The Medical Alliance of America.

Something over a year ago an organisation with the above title secured a charter from the Dominion Government, and at once proceeded to exploit the profession of medicine in Montreal and elsewhere. When the alliance was seeking powers from the Canadian Parliament its methods and its purposes received pretty severe criticism in the pages of the *Montreal Medical Journal*, but for some reason or other this was not followed up by any of the other medical journals in Canada, so that when the agents of the alliance some few weeks ago commenced operations in the city of Toronto their name was quite new to the medical profession there. The objects of this alliance are to insure people against medical bills, to insure practitioners against bad accounts, and to insure financial profit to the company. Medical men and the laity are solicited to become members of the alliance at the rate of 15 cents a month, or a man with a family can become a member at the rate of 10 cents per month per member of family. At the end of 10 years the member of the alliance is handed back all the money he has paid into it, and during all that time he has had his medical attendance for nothing. The advantage to the physician of becoming a member of this alliance, from the standpoint of the company, is that the company will pay his bills and that he will have no more bad debts to collect.

The alliance is receiving the cold shoulder from the medical profession in Toronto.

Royal Victoria Hospital, Montreal.

The governors of the Royal Victoria Hospital held their annual meeting in the last week of January. The superintendent's report showed that during the year 1900 there had been 2619 patients admitted to the hospital. Of these 1469 were free patients, 741 were public ward patients at 50 cents per day, and 409 were private patients. The death-rate for the year had been 4·95 per cent., or if those dying within 48 hours after admission be deducted, 3·83 per cent. The total cost per day per patient was $1.47 as against $1.55 in 1899. The income for the year was $129,570.34, while the ordinary expenditure amounted to $99,208.62, leaving a balance of $30,361 72 which will be applied towards the cost of the new out-patient department.

Hospital for Sick Children, Toronto.

The report of this institution for the year ending Sept. 30th, 1900, shows that the hospital has cared for over 40,000 sick children of the province during the past 25 years and that the debt of $19,000 has almost entirely disappeared. The daily average of patients in the previous year was 101; during the past year it has been 111. During the past year 5776 patients have been treated. Of these 767 were in-patients, an increase of 97 over 1899, and 5009 were out-patients, an increase of 734 over the previous year. On Toronto island, overlooking Lake Ontario, is what might be called the summer residence of this institution. It is known as the Lakeside Home for Little Children and is a well-equipped sanatorium with accommodation for 150 children and 20 nurses.

Toronto, Feb. 9th.

Obituary.

MAX VON PETTENKOFER.

(FROM OUR BERLIN CORRESPONDENT.)

PROFESSOR VON PETTENKOFER, the founder of scientific hygiene, and one of the veterans of medical science in Germany, died in Munich on Feb. 10th. The circumstances of his decease were very tragic, for he committed suicide while in a state of mental depression induced by dread of losing his reason. He had reached an advanced age, being born in 1818 at Lichtenheim in Bavaria. He completed the curricula both of a chemical and also of a medical student at Munich, receiving the diploma of a chemist and the degree of M.D. from that university. He was in course of time appointed assistant chemist to the Royal Mint at Munich and while holding this position made a series of researches both in theoretical and practical chemistry. As early as 1850 he turned his attention to hygienic questions, a subject which attracted him on account of the amount of illness existing in Munich, which was formerly one of the most unhealthy towns, not only of Germany, but of the whole continent. Enteric fever was prevalent there nearly the whole year round and cholera, when appearing in Munich, was of the most malignant character. He made enteric fever his special study and discovered that there was a definite connexion between this disease and the subsoil water. According to his theory enteric fever became prevalent when the subsoil water was low. This theory he maintained for a long time, till the new bacteriological era in hygiene, inaugurated by the researches of Professor Koch and his disciples, began; although he was fully aware of the great importance of bacteriology in hygienic questions he could never be convinced that pathogenic bacteria were the only causes of epidemic diseases and that the object of hygiene was to get rid of them. In the beginning of the bacteriological era the hygienists of Germany were really divided into two different parties, the Pettenkofer school and the Koch school; in course of time a compromise took place between the "contagionists" and the "localists" as it was recognised that the two theories were not contradictory. It may be remembered that Professor von Pettenkofer in order to prove the innocuousness of bacteria went so far as to swallow a culture of cholera bacilli. His health did not suffer and it is now known under what circumstances this experiment may be safely performed and that it is quite inconclusive as evidence that these bacteria are harmless. At the time, however, it was believed to be a valuable argument against Professor Koch's theory. Professor von Pettenkofer took care that his researches should bear fruit in a practical sense by leading to hygienic improvements in Munich. By his advice sewers were constructed and the water-supply was regulated in so satisfactory a manner that Munich is at present one of the healthiest towns in Germany. The malignant form of enteric fever formerly so characteristic of Munich has disappeared and the sporadic cases which occur are neither more numerous nor more severe than elsewhere. In addition to his work on enteric fever Professor von Pettenkofer made numerous researches on ventilation and heating, on the chemical and physical qualities of the soil, on food, and on respiration. His researches on the phenomena of respiration were of fundamental importance. He worked at them in conjunction with Professor Voit by the aid of a special apparatus which was a gift from the late King of Bavaria and which enabled experiments to be made on the human subject. He was the first who introduced exact scientific methods into hygienic questions and who treated hygiene from an experimental point of view. It was through him that hygiene has been raised in public opinion to an equality with the older branches of medicine and that the State authorities have given it practical recognition by appointing professors of hygiene in every university of Germany. Although some of his views have been superseded by more recent researches he will ever be regarded as the leader of the modern developments of hygiene. The announcement of his melancholy death has therefore caused great sorrow, and the newspapers are unanimous in expressing the opinion that in him Germany has lost one of the greatest of her sons.

BARON ALFRED RUGG, L.R.C.P. LOND., M.R.C.S. ENG.

By the death of Mr. Baron Alfred Rugg on Feb. 11th Wood-green has sustained a serious loss. Of handsome and distinguished presence Mr. Rugg was a well-known figure in the district and enjoyed the esteem and confidence both of his professional colleagues and of the public.

His medical education was received at University College. In 1868 he took the diploma of M.R.C.S. Eng. and in 1869 that of L.R.C.P. Lond., after which he acted as medical officer at Bournemouth General Dispensary and at Earlswood Asylum. He joined the late Mr. Basil Ringrose as a partner in 1875, and since that date his life was spent in Wood-green, a place which has developed from a picturesque village into a populous suburb of North London. Mr. Rugg was surgeon to the Oddfellows and Foresters and to the Great Northern Railway; he was on the staff of the Wood-green Cottage Hospital and acted as medical referee to several insurance societies. He died at the age of 53 years from pleurisy and pneumonia after only a few days' illness and was buried at Paddington Cemetery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ritter von Hochberger, who was the *doyen* of Carlsbad physicians, having attained the age of 92 years. He was, however, able only two years ago to take an active part in a medical congress.—Dr Johann Natterer, a Vienna medical practitioner, whose scientific work in the domain of experimental physics—e.g., the liquefaction of gases—was of a quite uncommon order for a man engaged in active medical practice. He was 80 years of age.—Dr. Victor Pashutin, Professor of Pathology in the St. Petersburg Military Medical Academy. His researches on the physiology of the nervous system and on medical chemistry, together with his text-book on general pathology, marked him as a worthy representative of Russian medical science. He was 55 years of age.

HEALTH OF TORQUAY.—Mr. P. Q. Karkeek, the medical officer of health of Torquay, in his annual report for 1900 states that the birth-rate was 15·5 per 1000 and the death-rate was 13·6 per 1000. There were 29 deaths from cancer. During the year 40 cases had been admitted to the sanatorium for infectious diseases. Mr. Karkeek reports that places where ice-creams were manufactured had been inspected and improvements made, and he adds that, speaking generally, the manufacture of penny ices is not carried on under satisfactory conditions.

Medical News.

UNIVERSITY OF LONDON.—At the Intermediate Examination in Medicine held in January the following candidates were successful:—

ENTIRE EXAMINATION.

First Division.—Olive Muriel Elgood, London School of Medicine for Women; Archibald M. Henry Gray, University College; Leonard Gregory Parsons, University of Birmingham; and John Bart Rous, St. Mary's Hospital.

Second Division.—Edwin Lancelot Ash, St. Mary's Hospital; Gerald Rade Bellamy, Charing-cross Hospital; William Brown Clark, King's College; Helen Mary Collen, London School of Medicine for Women; Ernest Harold Drinkwater, University College, Liverpool; John Ferguson, St. Bartholomew's Hospital; Peter Gifford Foulkes, Middlesex Hospital; Jessie Josephine Francis, London School of Medicine for Women; A. Augustus Russell Green, University of Birmingham; Harold Axel Haig and Geoffrey Seccombe Hett, University College; Bernard Higham, St. Thomas's Hospital; William Algernon Louis Holland, University of Birmingham; Richard Holtby, St. Bartholomew's Hospital; Catherine Mary Ironside, London School of Medicine and Royal Free Hospital; Cecil Lionel Lakin, Charing-cross Hospital; Jessie Lamb, London School of Medicine and Royal Free Hospital; Charles Hugh Latham, St. Thomas's Hospital; Norman Macfadyen, St. Bartholomew's Hospital; James Alexander Milne, London Hospital; Clifford Arthur Moore, University College, Bristol; James Cecil Mottram, University College; Percy Alfred Peall, Guy's Hospital; Kate Anne Platt, London School of Medicine and Royal Free Hospital; Ireton George Pritchard, King's College; Charles Michael Roberts, St. Thomas's Hospital; Frank Herbert Rotherham, Cooke's School of Anatomy and Charing-cross and London Hospitals; Charles Russ, St. Mary's Hospital; Francis William Schofield, Owens College and Manchester Royal Infirmary; Henry Gates Sievwright, University College, Cardiff; Herbert Douglas Smart, Guy's Hospital; Annie Broomhall Thin, London School of Medicine, King's College, and Birkbeck Institution; Asa Claude Ali van Buren, St. Bartholomew's Hospital, King's College, and Cooke's School of Anatomy; Hugh Watts, Guy's Hospital; and Ada Miles Whitlock, London School of Medicine and Royal Free Hospital.

EXCLUDING PHYSIOLOGY.

Second Division.—Alice Marian Benham, London School of Medicine for Women; Christian Constance Bernard, London School of Medicine and Royal Free Hospital; Margaret Lucy A. Boileau, London School of Medicine for Women; Percy Charles Bushnell, St. Thomas's Hospital; William Henchman Cole and Charles Henry Dawe, Guy's Hospital; Mabel Emily Gates, London School of Medicine and Royal Free Hospital; George Francis Innes Harkness, University College; William Charles Frederick Harland, St. Bartholomew's Hospital; Bernard Hart, University College; Horace Bryden Hill, St. Bartholomew's Hospital; William Stanley Hughes, University College, Cardiff; Henry Arthur Kellond-Knight, St. Bartholomew's Hospital; Kate Knowles, London School of Medicine for Women; Anthony Richard Neligan, St. Bartholomew's Hospital; John Jekyll Rainforth, London Hospital; Charles Chapman Rushton, Owens and University Colleges; Isabel Gertrude Sexton, London School of Medicine and Royal Free Hospital; John Kendall Syms, University College; and Margaret Cordelia Vivian, London School of Medicine and Royal Free Hospital.

PHYSIOLOGY ONLY.

First Division.—Ernest William Charles Bradfield, St. Mary's Hospital; Desborough Brodie, St. George's Hospital; Anne Fenton Cleaver, London School of Medicine and Royal Free Hospital; Philip Claude Tresilian Davy, University College; John Jones, London Hospital; Beatrice Mary Kidd, London School of Medicine for Women; Edward Bertram Smith, St. Bartholomew's Hospital; Emily Gertrude Stuart, London School of Medicine and Royal Free Hospital; Robert James Waugh and Edward Colston Williams, St. Bartholomew's Hospital; and Henrietta Leila D. Williams, London School of Medicine for Women.

Second Division.—George Cuthbert Adeney, St. Thomas's Hospital; Walter Ball, Westminster Hospital; Jeannette Rachel De Pass and Ruby Ellen Glanville, London School of Medicine for Women; Herbert Myer Goldstein, Guy's Hospital; Ida Margaret Guilbaume, London School of Medicine and King's College; Herbert Stanley Jones, Guy's Hospital; William Wilson Nock, Mason University College; Charles Derwent Pye Smith, Guy's Hospital; John Noel Sergeant, St. Thomas's Hospital; Herbert Bartlett Simpson and Malcolm William Stewart Smith, University College; James Batson Stephens, St. Mary's Hospital; Ernest William Strange, Guy's Hospital; Robert A. Slater Sunderland, St. Bartholomew's Hospital; Louisa Graham Thacker, London School of Medicine and Royal Free Hospital; Edith Eleanor Tucker, London School of Medicine for Women; Frederick Robert Elliston Wright, St. Thomas's Hospital; and Walter Perceval Yetts, St. Bartholomew's Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the first examination of the board at the January meeting of the examiners in the subjects indicated:—

Chemistry.—Edward Bailey Aylward, Parwatiprarad Vishvanath Bratt, and Rowland Alessandro Bowling, St. Bartholomew's Hospital; Bertram Frend Bartlett, University College, London; Arthur Ellis Blythman, University College, Sheffield; John Bryan and Francis Garland Collins, London Hospital; Laurence Henry Burner, Guy's Hospital; William Cook, Mason University College, Birmingham; Clifford Pendrill Charles and Percival Alfred Dingle, St. Bartholomew's Hospital; Frederick Spencer Davies, St. Thomas's Hospital; Alfred Dinnis and Harold William Farebrother, Charing Cross Hospital; Richard Vernon Favell, William Reginald Favell, and William Edward Lindsey Fowler, St. Bartholomew's Hospital; Ira Rose Fearn, Guy's Hospital; George Edward Ferguson and Frederick William Hobbs, St. Mary's Hospital; William James Fletcher, Owens College, Manchester; Hector Lionel Howell, Charing Cross Hospital; Alfred John Hopkinson Iles, St. Thomas's Hospital; Robert Rutson James, St. George's Hospital; James Charles Robert Lind, University College, London; Cecil Henry Gustav Luxmoore, St. Mary's Hospital; Malcolm Leckie, Rowland Phillip Lewis, and John Orrett Musson, Guy's Hospital; Walter Gerald Loughborough and James Eustace Radclyffe McDonagh, St. Bartholomew's Hospital; Douglas Catterall Leyland Orton; Owens College, Manchester, and the Municipal Technical School, Oldham; Benjamin James Phillips, Surgeons' Hall, Edinburgh, and University College of South Wales, Cardiff; Walter Reeve and Edwin Walter Routley, Guy's Hospital; Arthur George Lawrence Reade, Charing Cross Hospital; Hubert George Rickman, St. Mary's Hospital; Stuart MacKenzie Saunders, Science, Art, and Technical School, Plymouth; George Henry Sedgwick and Edward Sutcliffe, Yorkshire College, Leeds; Harold Sigismund Sington and George Theodore Stephens, St. Thomas's Hospital; Harry Ernest Thomas, London Hospital; Samuel Hilton Tinsley, St. Mary's Hospital; Joseph Frederick Trewby, Birkbeck Institute; Frederick Weber and Cyril Oswald Oxford Williams, St. Bartholomew's Hospital; Alfred Gurth Whitaker, Charing Cross Hospital; and William Wynne Williams, King's College, London.

Practical Pharmacy.—John Howard Addinsell, University College, Liverpool, and King's College, London; Edward Guy Anthonisz and Edward Leslie Bartlett, St. Mary's Hospital; Algernon James Beadel, Guy's Hospital; Frank Elliott Bolton, University College, London; John Bryan, London Hospital; Arthur Henley Bloxsome and George Elliott Cathcart, St. Bartholomew's Hospital; Frederick John Cutler, private study; Harold Clapham and Arthur George Cole, St. Mary's Hospital; Robert Harry Lucas Cordner and Edward William Dewey, St. George's Hospital; George De La Cour, University College, London; Reginald Inglis Douglas, St. Bartholomew's Hospital; John Freeman Douse, Guy's Hospital; Bertram Joseph Eccles, Mason University College, Birmingham; Charles Horace Fagan, St. George's Hospital; William James Gifford Gayton and Jonathan Grogono, London Hospital; Robert Gray Gillies, private study; Edward James Gaffney and George Sullivan Clifford Hayes, Guy's Hospital; Frederick Harold Hand, St. George's and St. Mary's Hospitals; William John Hogg, Queen's College, Belfast; Geoffrey Wallace Grainger Hughes, King's College, London; Samuel Clifford Hayman, Herbert James, and William John Jones, University College, Bristol; William Percival Ker, Guy's Hospital; James Malcolm King, Surgeons' Hall, Edinburgh, and University College, London; Francis Courtenay Lambert and Nelson Low, St. Mary's Hospital; Thomas George Miles and Percy Frank Minett, Guy's Hospital; Eric Stewart Marshall and Charles Vere Nicoll, St. Bartholomew's Hospital; Leonard Newsom Morris, University College, Bristol; George Smyth Oades, University College, Bristol, and Charing Cross Hospital; Arthur Carr Osburn, Guy's Hospital; Vining Gedney Joseph Paul and David Phillips, St. Mary's Hospital; Arthur Francis Rearden, St. Thomas's Hospital; Vivian Ernest Ridewood, London Hospital; Ernest Edward Semmence, Surgeons' Hall, Edinburgh, and St. Thomas's Hospital; Arthur Walrond Soper, Guy's Hospital; Harold Foster Strickland, Charing Cross Hospital; Tom Timothy, University College of South Wales, Cardiff; Oswald Henry Vevers, London Hospital; Charles Visger, University College, London; Ernest Walker and Charles Murray Woods, Charing Cross Hospital; John Walker, St. Thomas's Hospital; Theophilus Ralph Waltenberg, Owens College, Manchester; George Hope Warren, King's College, London; Walter John Weston, St. George's Hospital; and Frederick Ernest Wilson, Guy's Hospital and University College, London.

Materia Medica.—John Evans, Cambridge University and St. George's Hospital; Laurence Galsworthy, St. Bartholomew's Hospital; Edward Green, King's College, London; Edwin Walter Routley, Guy's Hospital; and Francis John Russell, London Hospital.

Elementary Biology.—Hugh William Acton, Middlesex Hospital; James Elrick Adler, London Hospital; Arthur Keith Armstrong, St. Bartholomew's Hospital; Edward Leicester Atkinson, St. Thomas's Hospital; Stanley Bott, Wyggeston School, Leicester; Cuthbert Garrard Browne, Westminster Hospital; John Bryan, London Hospital; John Bramley Ball, Laurence Henry Burner, Walter Henry Skardon Burney, Alfred Hollier Clough, and Vincent Ackroyd Faillner Costobadie, Guy's Hospital; Emil Christofferson, University College, Bristol; Vivian Colmer, London Hospital; Charles Arthur Frederick Cresswell, University College, London; Arthur Hubert Davis, St. George's Hospital; George Edward Fritche, Middlesex Hospital; Wilfrid Enos George, London Hospital; Stanley Rider Gibbs, St. Thomas's Hospital; Thomas Reginald Harvey, Guy's Hospital; William John Lennox, Merchant Venturers' Technical College, Bristol; William Sherwood Livock and Arthur Harkness Macdonald, London Hospital; John Eustace Radclyffe McDonagh, St. Bartholomew's Hospital; Arthur Llewelyn Morgan, Frederick Morres, and Henley Hamlyn Moyle, Guy's Hospital; Oswald Sinclair Norton, City of London College; Armstrong Smith, Middlesex Hospital; John Edwin Scales and Lionel Duncan Stamp, Guy's Hospital; John Ronald Rigden Trist, St. Bartholomew's Hospital; Oswald Henry Vevers, London Hospital; Alfred Gurth Whitaker, Charing Cross Hospital; Ernest White, Guy's Hospital; and Everard Lister Wright, St. Bartholomew's Hospital.

THE ST. PANCRAS LUNACY SCANDAL.—It will be remembered that an inquiry was opened by the Local Government Board on July 10th, 1900, concerning certain irregularities which had taken place with regard to the certification and transfer of lunatics. The inquiry was

adjourned on July 12th, but the Local Government Board issued a circular letter which was practically a kind of interim judgment, in which they said that they considered the practice which they knew to exist of relieving officers receiving payments from parish medical officers and proprietors of licensed houses for the reception of lunatics in connexion with the reception of lunatics was indefensible. The Local Government Board have now sent a communication to the St. Pancras Guardians saying that the Local Government Board have decided to allow the incriminated officers to continue in office, but they request that the officers in question may be informed of the Board's grave displeasure at their conduct. Should there be any ground of complaint against them in future with regard to any other matter their present offence will be taken into account. These observations do not apply to Dr. Walter Smith or to Mr. Murphy. The whole case seems to the Board to show the need for increased care in the administration of the Lunacy Acts in certain particulars, and communications are in progress with the Secretary of State and the Lunacy Commissioners upon the subject.

ROYAL ORTHOPÆDIC HOSPITAL.—The annual court of the Royal Orthopædic Hospital, 297, Oxford-street, was held on Feb. 18th in the board-room of the hospital, about 20 governors attending, with Mr. H. H. Marks in the chair. The report of the committee of management was adopted and a resolution was passed confirming a previous resolution giving the committee full power to sell the present site and buy another. Efforts are being made to find a new site in accordance with the recommendation of the Council of the Prince of Wales's Hospital Fund for London. The meeting lasted for two hours and was remarkable for extreme freedom of speech. Considering the heated nature of some of the remarks indulged in by those interested in the welfare of the hospital it is difficult to understand how the deputy chairman, Mr. Ernest Flowers, M.P., could affirm that the work had gone on very smoothly, successfully, and harmoniously.—Mr. H. A. Reeves, one of the surgeons of the hospital, speaking for the surgical staff, roundly declared that if he were chairman he would not sign the report and stigmatised as illegal the resolution giving the committee full power to sell the present site of the hospital valued at £45,000 and to buy another. The paragraph in the report referring to the Prince of Wales's Hospital Fund was, in Mr. Reeves's opinion, simply throwing dust in the eyes of the ignorant public.—Discussing the committee's plans to remove the hospital into the heart of London, Mr G. Barham declared it was one of the maddest schemes in the world, the very maddest he had ever heard.—Dr. D. Walsh said that as it was decided to rebuild the hospital he would like to know if the position of architect to the hospital was to be an honorary post in the future or not.—The Chairman said he did not see how the question arose, but Dr. Walsh insisted on a clear answer to his question. Mr. Flowers said that it was an indecent thing that the point should be called in question by the governors and he resented it most strongly.—Dr. Walsh, however, wanted an assurance in regard to the future architectural charges, whereupon Mr. Flowers said that the architect would never receive a sixpence. He was followed by Mr. Reeves, who said that the question of recompense had cropped up and as the labourer was worthy of his hire it had been considered that if the architect would leave it to the committee he should have an honorarium. The architect at this point entered the room and after the circumstance had been explained to him declared that his post was an honorary one. The proceedings went along fairly quietly for the next few minutes till Mr. Reeves again caused commotion by saying that the committee had made no real effort for the hospital for 25 years. Something, he said, must be done and he proposed raising money for the hospital on the "mutual principle." The explanation of what this meant was difficult to follow, but it somehow led Mr. Reeves to declare that Mr. Marks (the chairman) had said that he would lend £5000 to the hospital, upon which the Chairman remarked that Mr. Reeves's statement was incorrect and his memory defective. It was some time before the meeting got to business again, Mr. Marks saying that he refused to change his chairman's seat into a witness-box for his own cross-examination. Here one of the governors of the hospital said that as the committee had made no effort he thought Mr. Reeves's plan should be considered. The honorary treasurer, Mr. R B. Martin, M.P., thereupon went into the scheme in detail with Mr. Reeves, but finally the whole matter was ruled out of order by the Chairman. Everything went on again quietly till Mr. Flowers in again discussing the question of removing to another site referred to what he called the painful and contemptible attack on their architect. This naturally brought up Dr. Walsh who vigorously protested against this language and improved the occasion by pointing out that Moorfields Hospital had removed to another site after selling their valuable freehold property with the result that they had plunged themselves into financial ruin.

A PRESCRIBING DRUGGIST.—An inquest was held at Worle, Somerset, on Feb. 11th, upon the body of a man, aged 42 years. The deceased had complained of a sore-throat and consulted a druggist who gave him some medicine. The same night he was seized with a choking sensation in his throat and expired before a medical man arrived. A post-mortem examination showed that death was due to suffocation caused by an abscess discharging into the air-passages.

CARDIFF INFIRMARY.—The management committee of the Cardiff Infirmary has decided that under no circumstances, either of urgency or otherwise, shall surgical instruments belonging to the infirmary be taken away from the institution. This decision has been arrived at in consequence of some members of the staff having borrowed certain instruments and retained them for an unreasonable and unnecessary length of time.

ON the closing of his private military hospital at the Gables, Surbiton, Sir Alfred Cooper has given the bedsteads, bedding, and other requisite articles to St. Thomas's Hospital, as an acknowledgment of the assistance rendered to the sick and wounded soldiers by the medical and surgical staff of that institution.

OVERCROWDING IN KENSINGTON.—This borough council has decided to authorise the medical officer of health to employ *pro tem.* six sanitary inspectors, to inspect the most densely inhabited streets in the borough, and procure the fullest and best information on the question of overcrowding.

BRITISH MEDICAL ASSOCIATION: THE CHELTENHAM MEETING.—A meeting convened by the Mayor was held at Cheltenham a few days ago to take preliminary steps in preparation for the meeting of the British Medical Association in Cheltenham next summer. The Mayor read letters of apology and support from several gentlemen, including Mr. J. T. Agg-Gardner, M.P., who promised a subscription of 10 guineas and asked for approval of the steps which he had already taken in opening a fund for extending hospitality and entertainment to the expected guests.—Dr. Ferguson mentioned that the suggestion that the meeting should be held in Cheltenham had been made from headquarters without solicitation on the part of the district branch. It was 64 years since the association had visited Cheltenham. The members in the Gloucestershire district numbered about 100 and they had already subscribed £500.—Dr. Cardew said, so far as the general programme had been settled, it was as follows—viz., Tuesday, service in St. Matthew's Church, attended by the corporation in state and the members in their robes, followed by the address of the President-elect (Dr. Ferguson) in the Princess Hall, Ladies College; Wednesday, professional discussions; Thursday, further professional work, followed by a public dinner and soirée; Friday, concluding meetings, visit to Gloucester, and other trips; and Saturday, excursions.—Mr. Levy Wood asked whether steps would be taken to bring the Cheltenham waters before the medical profession, and Mr. F. J. Bennett, as a member of the Baths Committee, replied that steps were being taken to have them made up in a palatable aerated form.—The Mayor mentioned that there need be no fear of the town not rising to the occasion. As the time approached it would probably be found difficult to get in the engagements. Colonel Rogers had promised a reception at Battledown Court, a delightful spot for such a gathering, and on Wednesday the day would be given up to civic hospitality. On some other day the Freemasons of Cheltenham and Gloucester would like to offer some hospitality to members of their great brotherhood in the profession.—Dr. E T. Wilson, in proposing a vote of thanks to the Mayor, expressed the hope that the visit would break down the prejudice which some medical men had against Cheltenham and prove to them that it was not so relaxing as they had supposed.—The meeting then closed.

UNIVERSITY OF CAMBRIDGE.—At the congregation on Feb. 14th the following degrees were conferred:—M.D.: E. S. Verdon, Jesus, and A. J. Collis, Selwyn Hostel. M.B.: F. A. Bainbridge, Trinity. M.B. and B.C.: F. C. Shrubsall, Clare, and A. Emerson, Gonville and Caius.

MR. RALPH STONEY, Colonial Surgeon, has been transferred from the British East Africa Protectorate to the Uganda Protectorate. Having passed the required examination in the Hindustani language he has received the Government grant of £50.

PRESENTATIONS TO MEDICAL MEN.—On Wednesday evening, Feb. 6th, at Wrenbury, Nantwich, a deputation of the members of Court "Wrenbury," No. 769, A.O.F., waited upon Mr. W. Thomson, their late medical officer, and presented him in the name of the Court with a silver salver bearing the following inscription: "Presented to Wm. Thomson, Esq., L.R.C.P. Edin., by the members of Court 'Wrenbury,' 769, A.O.F., in recognition of his services as medical officer during a period of 50 years. Dec. 31st, 1900." Tenure of office during such a lengthened number of years must surely be almost unique in the history of friendly societies, and shows the sympathy existing between the members and their late surgeon.—Mr. Robert Reynolds, M.R.C.S. Eng., of Steeple Bumpstead, Essex, has been the recipient of a testimonial on retiring from his practice—namely, a cheque and an illuminated album. The latter is richly bound and bears the following inscription:—"This album, with 472 names of subscribers appended, together with the sum of fifty-five guineas, was presented to Robert Reynolds, Esq., M.R.C.S., &c., at a public dinner held in the parish of Steeple Bumpstead, Essex, on the 14th day of February, 1901, as a token and expression of the esteem and goodwill for him after 42 years' residence and practice in this parish and neighbourhood by his many friends resident in the following parishes: Steeple Bumpstead, Helions Bumpstead, Birdbrook, Hempstead, Ridgewell, Stambourne, Sturmer, and Cornish Hall End."—At Gunnislake, Cornwall, on Feb. 7th the members of the class of the Callington branch of the St. John Ambulance Association presented Mr. Albert Bowhay, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., D.P.H. Camb., with a dressing-case as a mark of appreciation for his services as lecturer.—The members of the St. Austell (Cornwall) branch of the St. John Ambulance Association on Feb. 11th presented Mr. C. W. Seccombe, L.R.C.P. Lond., M.R.C.S. Eng., with "Osler's Practice of Medicine" as a mark of appreciation for his services as honorary lecturer.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Opening of the Session.

THE KING opened in person and with full State ceremonial his first Parliament on Thursday, Feb. 14th. His Majesty, accompanied by Queen Alexandra, drove in state through the streets from Buckingham Palace to the Royal entrance of the House of Lords where he was met by the Chief Ministers of State and various functionaries of the Court. A procession was then formed which marched through the Royal gallery to the throne at the far end of the House of Lords. His Majesty, in presence of Lords and Commons, took the declaration required by the Bill of Rights with regard to the doctrine of transubstantiation and the saying of masses, and having signed the document recited with his own voice the terms of the Royal message to Parliament. Many Members of the House of Lords can only make themselves imperfectly heard owing to the bad acoustic properties of the chamber, but His Majesty, speaking with strong and clear voice and careful emphasis, was clearly heard even at the back of the most distant gallery.

The King's Speech.

There were few points of special interest to the medical profession in the Speech from the Throne. Reference was made to the climatic difficulties met with and overcome by the expedition under Sir James Willcocks in Ashanti and to the suffering and mortality caused by the prolonged drought in India, and nine subjects of prospective legislation were mentioned. Three of these subjects were mentioned without qualification, but the others had attached to them the always-significant observation that they will be dealt with in the course of the session "if the time at your disposal shall prove to be adequate." Among the subjects qualified in this way were the Amendment and Consolidation of the Factory and Workshops Acts, the Better Administration of the Law respecting Lunatics, the Amendment of the Public-Health Acts with regard to Water-supply, and the Prevention of Drunkenness in Licensed Houses and Public Places.

The Midwives Bill.

Early in each session private Members with Bills to introduce engage in a ballot for places for the discussion of these Bills on second reading. The Member who draws the paper marked "No. 1" gets the first choice of place for the measure in which he is interested, he who draws "No. 2" the second, and so on down the list. This ballot took place on Monday, Feb. 18th, and the promoters of the Midwives Bill drew no better figure than "38," this figure being drawn by Mr. Bond, the Member for East Nottingham. On the following day a large number of private Members' Bills were introduced, but the Midwives Bill was not among them.

HOUSE OF COMMONS.

FRIDAY, FEB. 15TH.

Introduction of a Medical Member.

Dr. EDWARD CHARLES THOMPSON, the successor of the late Mr. Macalese in the representation of North Monaghan, was introduced by Captain Donelan and Mr. Patrick O'Brien and took his seat.

Arsenic in Beer.

MR. CHAPLIN in the course of the debate on the Address raised this question and discussed the action of the Local Government Board in regard to the Manchester epidemic. He argued that the case against arsenic in beer as the cause of this epidemic had been proved and that what was wanted was action rather than further inquiry. There were various methods, he said, by which the matter might be dealt with. The Government might prohibit the use of substitutes altogether, they might limit the prohibition to sugars which had been proved to be injurious, they might restrict the use of these sugars within such limits as would be safe, they might discourage their use by a higher duty on the beer in the production of which sugar was used, or they might charge the duty on the materials instead of on the product. He pronounced no opinion on these proposals. If the Government were not prepared for any of these methods they might by a short Act of Parliament require that when substitutes were used the fact should be declared to the customers. Mr. Chaplin then referred to the communication of Professor Tunnicliffe and Dr. Otto Rosenheim[1] to THE LANCET on the subject of the presence of selenium in brewing sugar and beer. This, he said, was a new terror and it would appear to be quite beyond the scope of the reference to Lord Kelvin's Commission.—Sir CUTHBERT QUILTER spoke in the same sense and made an urgent appeal to the Government to take immediate action.—Mr. WALTER LONG, President of the Local Government Board, defended the action of his department in relation to the Manchester epidemic, and with regard to the general question he insisted that there must be further inquiry. An epidemic of this kind, he said, opened up new fields of inquiry and of knowledge, and this made it his duty to see not only that everything was done that could be done under the law as it stood, not only that all possible information was given to those who were locally responsible for the protection of public health, but also that every inquiry was made that was likely to throw new light on the subject, in order, if necessary, to take any fresh legislative action that might be taken on the solid basis of ascertained fact. He submitted to the House that, in the present state of their knowledge, there could not be given by those eminent scientific and medical men on whom the Local Government Board relied that clean bill of health which would surely be an absolute condition before it would be possible to exclude everything else and leave the manufacture of beer to one article alone. There was no desire in the appointment of a Royal Commission to delay a proper review of the question. He personally had done his best to get outside advice and opinion as to the course that should be followed, and so far he had not found one eminent scientific man of the opinion that they were wrong in the course they were adopting. With all the goodwill in the world he did not think it would be possible for any man in his position or for any Government to have taken a line other than that which had now been taken.

The South African Hospitals Commission.

Later in the evening three speeches were delivered with regard to the report of the South African Hospitals Commission and the general question of the care and treatment of the sick and wounded during the campaign in South Africa. Mr. BRODRICK, Secretary of State for War, sat in the House at the time, and no doubt he will take an opportunity of replying to the speeches.—Sir WALTER FOSTER repeated his statement that a great deal of the disease that had occurred was preventable. Typhoid fever, he said, must have been foreseen and proper precautions ought to have been taken against it. At the commencement of the war he suggested to the Government that they ought to send out some special corps or body of men to deal with the sanitation of camps and other places where soldiers were congregated, and the War Office having got the opinion of their Director-General decided that these matters might safely be left in the hands of the Army Medical Department. This decision, arrived at on Nov. 9th, 1899, had been absolutely contravened by the report of the Hospitals Commission, where the War Office were recommended to appoint properly qualified officers of the Royal Army Medical Corps to undertake sanitary duties. He therefore wished to know what steps it was proposed to take to carry out this recommendation. With regard to the report generally Sir W. Foster said there was a good deal of whitewashing attempted by the commissioners. The whitewash, however, was not sufficient to extend over the wide surface that had to be covered, and here and there it was so extremely thin that one could see the lurid facts betraying themselves under the coating with which the commissioners had tried to cover them. He believed that the Secretary of State was desirous of meeting the difficulties which had overtaken the Army Medical Service and of making the department better manned and more fit for its duties. This, however, should be done in a spirit of thorough reform. Splendid efforts had been made by private generosity, but he did not think we ought to rely in the future upon

[1] THE LANCET, Feb. 9th, 1901, p. 434.

private generosity in these matters. The taxpayers in this country were willing to find money in millions to make their army efficient and to protect the health of the men and we ought not to rely in the future on private effort coming to our aid. We ought not to rely, either, too much on civil surgeons to supplement the deficiency of the Royal Army Medical Corps, but we ought to equip our army just as thoroughly in the matter of medical service as we ought to do in the matter of artillery. He would, therefore, ask the right hon. gentleman in his reply to give the House some assurance that he would deal with this matter from top to bottom in a thorough spirit.—Mr. W. MURRAY GUTHRIE, the member for Bow and Bromley, who spent many months in South Africa and who gave evidence as to his experiences before the Commission, next addressed the House. He had no doubt, he said, that at first the Government were as ignorant as the country as to the true state of things at Bloemfontein. He remembered the surprise caused at Bloemfontein by the speeches of Sir William Mac Cormac and Mr. Treves in London. The former said that it would not be possible to have anything more complete or better arranged than the medical service in this war. Mr. Treves endorsed those words and went out of his way, if he might say so, to insult a body of women in South Africa, some of whom were perhaps very much in the way in Cape Town, but many of whom were doing service to their country. He did not think their patriotism was any less than that of Mr. Treves. When the celebrated letter of the hon. member for Westminster (Mr. Burdett-Coutts) was published he believed it came like a bombshell to the English people. Then came a debate in the House when the Government promised to appoint a Commission, and he was sorry that they did not consult some of the opposing faction with a view to allowing them to nominate one member to represent their views on the Commission. He was certain that the Government had the intention of getting at the truth of the matter, and he thought that they had made a mistake in not taking that course. If he had had time he would have liked to analyse a good deal of the evidence given before the Commission. He thought he would be able to show that, instead of credence being attached to the evidence given by civilians, more credence was attached to evidence given by the officers of the very branch of the service which was practically on its trial. There was the case of the men at Bloemfontein station. He had been an eye-witness of the events which the h m. Member for Westminster had recorded. In the report of the Co amission not only was his story discredited but the story of the very man who was responsible for the mistake occurring was taken for gospel. The Commission also believed Colonel Hexham's story as against that told by the surgeon of the Irish Hospital. The Commissioners in their report stated that the detention of the invalids at the railway station had not occurred often. But one of the witnesses, Captain Lawrence, a railway staff officer, asked whether there were many occasions on which men were kept waiting for a long time at the railway station, replied that he was sorry to say it was of constant occurrence. He suggested that the new committee which would probably be appointed to inquire into the army medical service should not be a departmental committee but a committee of wider scope, having on it some representatives of those civilians who had taken part in hospital work, so that the country should not have to depend entirely for evidence on the Army Medical Service Corps.—Mr. BURDETT-COUTTS, the third speaker, asserted that the inquiry of the Commission had not been conducted in a way calculated to elicit the whole truth and that the defects of the Army Medical Department had been concealed and buried in the lame and impotent conclusions of the report.

MONDAY, FEB. 18TH.

Enteric Fever among the Troops in South Africa.

Mr. BRODRICK, in answer to a question addressed to him by Sir WALTER FOSTER, gave the following approximate figures with regard to enteric fever among the troops in South Africa during the last three months of 1900—viz., October, 868 cases, 98 deaths; November, 1213 cases, 207 deaths; December, 1665 cases, 286 deaths. The total number of cases from the beginning of the war to December, 1900, was 19,101 and of deaths 4233. The number of officers and men invalided for enteric fever who had arrived in England from the beginning of the war to December, 1900, was 10,975.

Lead Poisoning in the Potteries.

Mr. RITCHIE, answering a question on this subject by Sir CHARLES DILKE, said: I am aware that in the months of July, August, October, and December, 1900 (but not in April or in any other month), the reported cases of plumbism in the industry of china and earthenware making were more numerous than in the corresponding months of 1899, the totals being 71 and 50 respectively. But the net result for the year as a whole was a reduction from 249 in 1899 to 200 in 1900, and this has followed upon a previous large reduction between 1898 and 1899. I a few days ago formally proposed a set of new rules to the manufacturers, following in the main the draft issued in August last, but containing certain amendments which appeared to me necessary and reasonable. I might have proposed the rules in this form some time ago, but I have been in negotiation with the representatives of the manufacturers in hope of arriving at a settlement and avoiding arbitration, and I have found them ready to accept with a few slight modifications most of my proposals. On the proposed "standard of insolubility," however, a serious difference of opinion arose between the Government chemist and the manufacturers' expert advisers, and I have come to the conclusion that this difference should be settled by arbitration. There are also certain points on which I am anxious that the workpeople should have an opportunity of stating their views before they are finally settled, and these will be dealt with on the arbitration, at which the workpeople are entitled to be represented.

Proposed State Inebriate Reformatory.

Mr. RITCHIE, in reply to Mr. HOBHOUSE, said that he had received numerous representations from county authorities urging the establishment of a State Inebriate Reformatory. He himself was anxious to see such a reformatory established and he was now in communication with the Treasury on the subject.

TUESDAY, FEB. 19TH.

The Government and the Army Medical Service: Statement by Mr. Brodrick.

Mr. BRODRICK took an opportunity at this sitting during the debate on the Address to reply to the speeches made on Friday with regard to the medical provision in South Africa and the report of Lord Justice Romer's Commission. Great blame, he said, had been thrown on the Army Medical Department and he did not suggest that this department had not many things to answer for, but in considering the mistakes of the department they must bear in mind the part which the House of Commons had had in bringing about the present state of things. Mr. Brodrick recalled that when nearly 14 years ago the late Lord Randolph Churchill carried on his crusade against public expenditure the Army Medical Department was severely criticised. He remembered a strong speech of the Member for Wolverhampton (Sir Henry Fowler) in which he said that there were too many doctors and that the department wanted overhauling, for it cost too large an amount of public money, and the report of the Committee appointed at the time bore out this belief. This Committee, after two years' investigation at the War Office, decided that there were too many doctors and that they were too highly paid, with a too high proportion of retired pay, and that the whole subject required revision. By this the War Office had ever since been influenced. In the House of Commons successive Ministers had laid it down that we must provide for three army corps at home and two abroad, and upon this the arrangements of the Army Medical Department had been made. Could they wonder, then, that when we came to send the equivalent of six army corps to South Africa the medical arrangements should be somewhat strained? Difficulties arose that were not foreseen in sending supplies along lines of communication longer than had ever been necessary in a continental war. The War Department in the matter of medical officers had for the last 14 years been between the upper millstone of a Parliament determined to keep down expenditure and the lower millstone of the medical profession, who denied their best candidates except upon better terms. The War Office did all it could to get better men, but the heads of the profession declared that medical men must have military rank, without which they could not hold up their heads among their military colleagues. He remembered that it was even urged that beyond the titles of "major" and "colonel" the title of "general" should be open to them. Five years ago Lord Lansdowne was assured that unless the title of "general"—not "surgeon-general"—were given other proposals would be useless. But not to trouble the House at length he would sum up what the experience of the war had shown. Mr. Brodrick then said: It has shown, in the first place, that these military titles have not altogether had the best effect. In the second place, the Commission of able, independent men, who whatever we may say of their conclusions certainly held no brief for the Government, have shown in their report that there has been no general disposition on the part of the Army Medical Department to shirk its duties, and that there has been great devotion shown among the medical men. If in some cases there have been defects of organisation and skill, that organisation can be reformed, and want of skill has been due to the fact that officers have been so hardly worked that they have not had proper opportunities of studying their profession. It has been said by the hon. gentleman opposite (Sir W. Foster) that we have not realised the importance of a suggestion that came from himself—that sanitary committees should be sent out to direct sanitary arrangements for the various camps. I think the experience of the war has shown that a committee of that character, or something like it, would have done good service. And, while knowing as I do the devotion to duty of the great mass of medical officers of the Royal Army Medical Corps, I cannot deny that it has been brought out in the course of these inquiries that there was a certain amount of professional jealousy and indisposition to avail themselves of outside assistance in an emergency, and perhaps too much of that red-tape disposition which is supposed to pursue the army in all its courses, which I, at all events, desire to see removed to a great extent. And in this respect let me say that so far from regarding those who have interested themselves in these matters, both here and in South Africa, with any suspicion I thank them for their attempts; I believe that they have been largely productive of good to the public service; and I believe that we may found on the recommendations of the Commission, and on the extraneous assistance we have received, partly from members of this House, a new and satisfactory system, but one which can only be brought about by a drastic reform of the Army Medical Service. But in the emergency as it now exists we cannot pretend to make a complete reform in a few weeks; we are bound to look at this question very carefully, and we are determined to call to our assistance the heads of the medical profession. It may be that by making our terms of enlistment more elastic, it may be that by making them more attractive in other ways, we can obtain a better class of men. All I would say is this, that if the House will give us a little confidence in this matter I will undertake that no effort shall be wanting, that there is no experience we can get but shall be turned to account, and that no past prejudices shall be allowed to intervene or prevent our giving the army in the future an effective medical service.

Dr. FARQUHARSON at a later period of the sitting congratulated Mr. Brodrick on the tone of his speech.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ALLAN, FRANCIS J., M.D., D.P.H., F.R.S.E., has been appointed Medical Officer of Health for the City of Westminster.

BERRY, A. E., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health, Burton-upon-Irwell Rural District, vice H. Knowles, deceased.

BLACKETT, EDWARD JOS., M.R.C.S., L.R.C.P., has been appointed Surgeon to the Hospital of St. John and St. Elizabeth, 20, Grove-end-road, St. John's Wood, London, N.W.

BOND, W. A., M.D., D.P.H. Camb., M.R.C.P. Lond., has been re-appointed Medical Officer of Health by the Holborn Borough Council.

BRARS, C. F., M.D., C.M. McGill Univ., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed District Medical Officer by the Sunderland Board of Guardians.

BUIST, J. J., M.B. Lond., has been appointed a Police Surgeon for the A, Central Division, Borough of Cardiff.

BULLEID, ARTHUR, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Midsomer Norton (Somerset) Urban District Council, vice A. Hastings Whicher, resigned.

COOMBS, WELLESLEY, F.R.C.S. Edin., has been appointed Honorary Anæsthetist to the Worcester General Infirmary.

FOTHERBY, H. A., L.R.C.P. Lond., M.R.C.S., D.P.H. Cantab., has been appointed Clinical Assistant to the Infirmary, Parish of St. Matthew, Bethnal-green, London.

FRYER, WM. F., L.R.C.P., L.R.C.S. Edin., has been appointed District Medical Officer for the whole Ipswich Union.

GOUGH, H. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Workhouse, Northwich Union, vice T. Moreton, resigned.

JONES, A. L., M.B., C.M. Edin., has been appointed Medical Officer of Health, Oystermouth Urban District, vice J. I. Bevan, deceased.

KELSON, W. H., M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the London Throat Hospital.

LALL, C. C., M.B., C.M. Edin., has been appointed Assistant Resident Medical Officer to the Infirmary, Salford Union, vice C. H. Woodcock, resigned.

LANE, G. J., M.D. Dub., has been appointed District Medical Officer, Bicester Union, vice E. V. Hemingway, resigned.

LOVELESS, W. K., L.R.C.P., L.R.C.S. Edin., has been appointed a District Medical Officer by the Stockbridge Rural District Council.

MCGAVIN, L. H., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Hospital for Women, Soho square, London, W.C.

MACKLIN, THOMAS THORNTON, M.D. Glasg., L.F.P.S. Glasg., D.P.H. Cantab., J.P., has been appointed to the Medical Charge of Troops at St. Mary's, Scilly Islands.

MOORE, THOMAS, M.R.C.S., has been appointed Medical Officer of Health, Hazel Grove and Bramhall Urban District.

NICHOLLS A. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Langport Rural District, vice J. Morgan, resigned.

OLIVET, J. M. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third and Fifth Districts, Poole Union, vice H. W. Scratchley.

PHILLPOT, G. F., L.R.C.P. Edin., M.R.C.S., has been appointed District Medical Officer, Bromsgrove Union, vice J. L. Hobbs, deceased.

PITTARD, M., M.R.C.S., has been appointed a Police Surgeon for the B, Grangetown, Division, Borough of Cardiff.

TREHARNE, J. L., M.R.C.S., has been appointed a Police Surgeon for the C, Roath, Division, Borough of Cardiff.

URQUHART, A., M.B., Ch.B. Aberd., D.P.H., has been appointed District Medical Officer, Staines Union, vice G. R. Symons, deceased.

WILLAN L. J., M.R.C.S., has been appointed District Medical Officer, Dorking Union, vice J. D. Rawlings, resigned.

Errata.—In our issues of Feb. 9th and 16th in the "Appointments" column, "Allen, F. J." should read Allan, F. J., M.D. Edin., D.P.H. Camb., F.R.S.E.; and "Annis, E. G.," should read appointed Medical Officer of Health for the Borough of Greenwich.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester-street, S.W.—House Surgeon for six months. Gratuity £5, with board and lodging.

BOROUGH HOSPITAL, BIRKENHEAD.—Senior and also Junior Resident House Surgeon. Salary £100 and £80 respectively per annum, with board and washing.

BOROUGH HOSPITAL, Bootle, Liverpool.—Senior Resident. Salary £100 per annum, with board, &c.

CENTRAL LONDON SICK ASYLUM DISTRICT.—First and Assistant Medical Officers and Dispensers. Salary for the First Assistant Medical Officer £100 per annum, and of the Second £75 per annum, each with board and residence.

CHORLTON-UPON-MEDLOCK DISPENSARY.—Resident House Surgeon, unmarried. Salary £130 a year, with furnished rooms and attendance.

CITY OF SHEFFIELD.—Assistant Resident Medical Officer for Infectious Diseases Hospitals. Salary £150 per annum, with board, lodging, and attendance.

COUNTY OF LANARK DISTRICTS OF THE LOWER AND MIDDLE WARDS.—Resident Physician for Lightburn Joint Hospital for Infectious Diseases, Shettleston, near Glasgow. Salary £130 per annum, with board, &c.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon. Board, residence, &c., and honorarium of £45 after completion of six months' approved service. Also Casualty Medical Officer for six months, renewable. Salary at the rate of £100 per annum.

EYE AND EAR INFIRMARY, Liverpool.—House Surgeon. Salary £80, with residence and maintenance.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, Holborn, E.C.—Honorary Physician Accoucheur.

GENERAL INFIRMARY, Gloucester, and GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeoncy. Salary £100 per annum, with board, residence, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Two House Physicians, unmarried, for six months and nine months respectively. Salary £30, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £40, with board and lodging.

ISLANDS OF SANDAY AND NORTH RONALDSHAY.—Resident Medical Officer. Salary £80 per annum, with dwelling-house, offices, garden, and ten acres of ground, subject to annual rent of £22.

KING'S COLLEGE HOSPITAL, Lincoln's Inn-fields, W.C.—Clinical Pathologist.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging. Also Assistant House Surgeon for six months. Salary £25, with board and lodging.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £80 per annum, with board, residence, and washing.

LONDON HOSPITAL MEDICAL COLLEGE.—Assistant Demonstrator of Anatomy. Salary £90 a year.

NORTHERN NIGERIA, WEST AFRICA.—Medical Officers, unmarried, aged 25 to 35 preferred. Salary £400 per annum and local allowance of 5s. per day during residence.

NORTH RIDING ASYLUM, Clifton, York.—Assistant Medical Officer, not more than 30 years of age. Salary commencing at £125, rising to £175, and £10 in lieu of liquor, with board, lodging, washing, and attendance.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £140 per annum, all found except board.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100, with board, lodging, and washing. Also Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon. Salary £80, with board, lodging, and washing.

ROYAL BOSCOMBE AND WEST HANTS HOSPITAL, Bournemouth.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—House Physician. Salary £50, with board and washing.

ROYAL INFIRMARY, Sheffield.—Junior Assistant House Surgeon. Salary £70 per annum, with board, lodging, and washing.

ROYAL SEA BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £80 per annum, with board and residence.

SHEFFIELD ROYAL INFIRMARY.—House Surgeon. Salary £120 per annum, with board, lodging, and washing, with an advance of £10 for the second and third years.

SOUTHPORT INFIRMARY.—Resident Senior House Surgeon. Salary £80 per annum, all found.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at the rate of £24 per annum, with board, washing, and residence.

STOKE-UPON TRENT UNION.—Medical Officer. Salary £200 per annum, with board, washing, and furnished apartments at the hospital.

ST. BARTHOLOMEW'S HOSPITAL.—Ophthalmic Surgeon.

ST. MARY'S HOSPITAL, Paddington, W.—Casualty Physician. Salary £75

SUFFOLK GENERAL HOSPITAL.—House Surgeon. Salary £100 a year, with board, lodging, and washing.

TOWNSHIP OF TOXTETH PARK, Liverpool.—Assistant Medical Officer of the Workhouse and Infirmary. Salary £100 per annum, with board, washing, and apartments.

URBAN DISTRICT COUNCIL OF BARNES.—Medical Officer of Health and Superintendent of Isolation Hospital. Salary £150 per annum.

WARNEFORD HOSPITAL, Leamington.—House Surgeon. Salary £100 per annum, with board, washing, and apartments.

WARNEFORD ASYLUM, Oxford.—Assistant Medical Officer, unmarried. Salary £100 a year, with board, lodging, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodgings, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Physician for six months. Honorarium at the rate of £75 per annum and board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BOOBBYER.—On Feb. 19th, at 56, Burns-street, Nottingham, the wife of Philip Boobbyer, M.B., of a son.

EVELYN.—On Feb. 11th, at Micklegate, York, the wife of William A. Evelyn, M.D., of a son.

FARNFIELD.—On Feb. 14th, at Mere, Wilts, the wife of William Walter Farnfield, M.R.C.S., L.R.C.P. Lond., of a daughter.

LOWE.—On Feb. 15th, at Horninglow-street, Burton-on-Trent, the wife of Walter G. Lowe, M.D., of a daughter.

LUFF.—On Feb. 17th, at 31, Weymouth-street, W., the wife of Arthur P. Luff, M.D., F.R.C.P., of a son.

MURRELL.—On Feb. 14th, at Blenheim Lodge, London-road, Reading, the wife of G. F. Murrell, M.B. Lond., of a daughter.

MARRIAGES.

LACKIE—EVANS.—At Felinfoel parish church, on Feb. 14th, by the Rev. J. W. Roberts, M.A., assisted by the Rev. David Davies, M.A., vicar of Llangennech, James Lamond Lackie, M.D., F.R.C.P.E., to Elizabeth Hilda, youngest daughter of David Evans, D.L., of Llangennech Park, Carmarthenshire. At home, 1, Randolph-crescent, Edinburgh, March 13th and 14th.

WINDLE—NAZER.—On Feb. 14th, at the Church of S. Catherine of Siena, Birmingham, Bertram C. A. Windle, M.D. D.Sc., F.R.S., Professor of Anatomy in the University of Birmingham, to Edith Mary, daughter of O. Nazer of Ashford.

DEATHS.

COOK.—On Feb. 16th, after three days' illness, Mabel Cook, the esteemed and valued matron of the British Lying-in Hospital, Endell-street, London, W.C., aged 31 years.

WEBSTER.—On Feb. 16th, suddenly, at his residence, Duppas-hill, Croydon, Geo. Leonard Webster, M.R.C.S., aged 40 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A QUACK AT PONTEFRACT: WISE WORDS FROM A CORONER.

AN inquest was recently held at Pontefract to inquire into the circumstances attending the death of a young woman named Elizabeth Prince, aged 19 years, who had up to a few days previous to her death enjoyed good health and followed her usual employment at certain liquorice works. When the girl was taken ill a herbalist named Tempest was called in, who treated her for "head complaint." The mother told the coroner that she thought Tempest was a fully qualified man or she would not have had him but would have called the medical officer of the club. A neighbour had told her that Tempest had said that he could give a death certificate if required. She asked for a death certificate when her daughter died, and Tempest said that he would send it, but witness heard no more until the police called. Tempest was at her house twice on the day that the deceased died, and though he was there at 2.30, and she died at four o'clock, he did not say that she was worse or that she was likely to die.—The registrar of births and deaths said that, acting upon instructions previously received from the coroner, he had refused to accept Tempest's certificate of death and had acquainted the coroner with the facts of the case.—The medical man who made a post-mortem examination of the body said that everything was normal except the left lung. Death was due to inflammation of that lung. There was nothing at all to indicate that there had been any "head complaint."—In answer to the foreman witness said that life was so uncertain that he could not definitely say that the girl would have recovered if she had been attended by a qualified medical practitioner: she would certainly have had a better chance. He considered it dangerous to the public welfare that these so-called doctors should be in practice. In summing up the coroner (Mr. Maitland) said that whenever he came across a case in which these quacks were concerned he would inquire carefully into it and if necessary go to the furthest extreme. He had already had one inquiry where Tempest had given a certificate of death, but here he seemed to have been on the wrong tack altogether, treating the deceased for "head complaint," whereas it had been proved that her head was all right and that she had died from inflammation of the lung. Had a proper medical man been called in in the first instance it was probable that the girl would have been still alive. Tempest had clearly held himself out as duly qualified, for they had it in evidence that he had told a Mrs. Boothman that he was so and that if required he could give a death certificate. It certainly seemed to him that the matter had reached a stage when the General Medical Council might take the case up again as they had done once previously. He did not think that these quacks should be allowed to go up and down the country and he thought that their employment was only due to ignorance. The jury returned a verdict that the woman had died from inflammation of the left lung, the foreman adding that the jury wished to condemn those of the public who engaged such unqualified quacks.

THE REMOVAL OF DEEP SUTURES.

To the Editors of THE LANCET.

SIRS,—All surgeons and nearly all general practitioners are well aware that the removal of deep sutures causes a considerable amount of pain to the patient and calls for the exercise of an appreciable amount of force on the part of the operator. Especially is this the case after operations for the repair of a ruptured perineum, or after immediate suture of deep lacerations of that structure. All trouble of this kind can be avoided by the very simple plan of cutting the stitches on one day and withdrawing them the next. Anyone doing this for the first time will be surprised to find how easily and painlessly they come out, and the reason for this will be apparent on a moment's consideration.

I am, Sirs, yours faithfully,

Wylam-on-Tyne, Feb. 18th, 1901. W. H. BISHOP.

*** The method advocated by our correspondent is fairly well known, but its value is worthy of a wider recognition, as it does much to relieve patients who often appear to dread the removal of stitches more than they dreaded the operation itself.—ED. L.

THE DISCRETION OF A CORONER.

To the Editors of THE LANCET.

SIRS,—Will you kindly give me your opinion on the following facts. A child, 18 months old, whom I have never seen before, was brought to my surgery one evening about 8.30 P.M. in a moribund condition, deeply cyanotic, with abdominal breathing. I found on inquiry that the child had been ill a fortnight but had no medical attendance whatever. On examination there was complete dulness on the right side as far as the clavicle. I diagnosed an empyema and told the mother that the child had not long to live. It died at 11 P.M. the same evening. I refused a certificate. The facts were laid before the coroner and he refused to hold an inquest. Kindly say (1) if you consider I was not justified in refusing a certificate, which I did on the grounds that I had not attended the deceased in its last illness, and that I was not aware of the cause of the empyema, both of which facts I should have had to certify, and (2) has the coroner arbitrary power of this nature to override a medical opinion and take the case right out of a medical man's hands?

I am, Sirs, yours faithfully,

Feb. 17th, 1901. J. M.

*** A coroner decides, as the result of preliminary inquiry, whether it is necessary to hold an inquest into the cause of a death. If he is satisfied that a death is natural he need not hold the inquest. He is not bound to be clear about the pathology of the case. In the circumstances narrated by our correspondent we are surprised that no inquest was held.—ED. L.

"THE CASE OF MR JOSEPH HENDERSON MARTIN."

To the Editors of THE LANCET.

SIRS,—Since my letter in THE LANCET of Feb. 9th, p. 443, I have received the additional subscriptions which I here acknowledge, and these have been forwarded to Mrs. Martin. Her gratitude for this timely help from known and unknown friends is unbounded. Only those who have found themselves absolutely destitute and with five young children dependent on them, and who have then received assistance from totally unexpected sources, can realise the feeling of thankfulness and encouragement which these generous gifts have brought to this poor lady in her affliction.

I am, Sirs, yours faithfully,

Chester-le-street, Feb. 19th, 1901. H. LYON SMITH.

	£	s.	d.
Amount previously acknowledged in THE LANCET	28	0	0
THE LANCET Relief Fund (second gift)	10	0	0
Mr. Charles Coates (Bath)	5	5	0
Dr. R. Craik (Conisbro)	5	0	0

"MEMORIAL TO THE LATE DR. ARCHIBALD HAMILTON JACOB."

THE following contributions to this memorial fund have been received or promised. Cheques and postal orders should be made payable to the honorary treasurers (Sir Charles A. Cameron, C.B., 51, Pembroke-road, Dublin, and Mr. L. H. Ormsby, 92, Merrion-square, Dublin), and crossed "Ulster Bank." The honorary secretary is Mr. George F. Blake, J.P., Registrar of the Royal College of Surgeons in Ireland:—

	£	s.	d.
Subscriptions already announced in THE LANCET	136	10	0
Mr. Arthur E. Barker	5	5	0
Mr. G. H. Broadbent ...	5	5	0
Dr. William J. Smyly	5	5	0
Dr. Charles Fitzgerald	5	5	0
Mr. Henry Sewill (per Mr. A. A. Tindall) ...	5	5	0
A. B. C. (per Mr. A. A. Tindall)	5	5	0
Mr. Edward C. Healey	5	5	0
X. Y. Z. (per Mr. A. A. Tindall)	5	0	0
Mr. I. Usher	5	0	0
Dr. Wm. D. Hemphill	5	0	0
Sir William Findlater, D.L.	3	3	0
Dr. Henry H. Head ...	3	0	0
Dr. H. W. Oulton... ...	2	2	0
Surgeon-Colonel G. C. Chesnaye	2	2	0
Dr. John H. Glenn ...	2	2	0
Dr. Joseph Redmond ...	2	2	0
Dr. Robert Browne ...	2	2	0
Mr. H. R. Swanzy ...	2	2	0
Dr. Ninian Falkiner ...	2	2	0
Dr. Arthur V. Macan ...	2	2	0
Mr. James Robinson (solicitor)	2	2	0
Dr. Joseph O'Carroll ...	2	2	0
Professor John B. Story	2	2	0
Dr. J. Hawtrey Benson	2	2	0
Professor Alec. Fraser...	2	2	0
Mr. C. H. Wade (per Mr. A. A. Tindall) ...	2	2	0
Mr. H. Nelson Hardy...	2	2	0
Dr. Charles F. Moore...	2	2	0
Dr. K. M. Taggert ...	2	0	0
Dr. R. Macdowell Cosgrave	1	1	0
Dr. William Walter ...	1	1	0
Mr. W. F. O'Grady ...	1	1	0
Dr. George Armstrong	1	1	0
Inspector-General F. W. Davis, R.N. ...	1	1	0
Dr. Richard Litton MacIntire	1	1	0
Mr. R. F. Tobin	1	1	0
Sir Robert Jackson, C.B.	1	1	0
Mr. P. A. MacDermott	1	1	0
Dr. Henry Potter	1	1	0
Dr. Henry G. Thompson, J.P.	1	1	0
Mr. Geo. H. Moorhead	1	1	0
Mr. W. J. Corrigan ...	1	1	0
Mr. F. Pierce	1	1	0
Mr. Robert J. Harvey...	1	1	0
J. C. P.	1	1	0
Mr. Arthur H. Benson	1	1	0
Mr. L. Werner	1	1	0
Lieutenant-Colonel F. C. Barker	1	1	0
Dr. M. J. Malone... ...	1	1	0
Mr. Thomas Reardon ...	1	1	0
Mr. Charles O'Connor...	1	1	0
Mr. William Perrin ...	1	1	0
Dr. Hugh Stoney... ...	1	1	0
Dr. Wm. Dobbin	1	1	0
Mr O'Connell J. Delahoyde	1	0	0
Miss Hemphill	1	1	0
Miss Janet G. Horwood	0	10	6
Dr. David Walsh (per Mr. A. A. Tindall) ...	0	10	6

"A MISTAKE SOMEWHERE."

To the Editors of THE LANCET.

SIRS,—Your correspondent "H. W." in THE LANCET of Feb. 16th, p. 524, under the heading "A Mistake Somewhere," assumes that there must have been an error in reporting Lord Lister to have stated that the inmates of a particular lying-in institution were better off than women attended by general practitioners "who hitherto had not been persuaded of the importance of antiseptic precautions." There is no error, alas! at any rate in regard to the fact conveyed by this statement. Attention has on more than one occasion been called to the fact that while in maternity hospitals the puerperal mortality has been reduced almost to vanishing point by the methodical use of perchloride of mercury that in general practice has remained practically what it was before the introduction of this beneficent application of antiseptic methods. Although the relatively high mortality of private patients

cannot fairly be laid exclusively at the door of the attendant physician it is hardly open to question that much of it is due to the systematic neglect of the simplest precautions, as many of us can testify from personal experience. The matter is one which deserves to be brought prominently before the profession, since it is one which seriously reflects on the manner in which midwifery cases among the poorer classes are attended. I am, Sirs, yours faithfully,

ALFRED S. GUBB, M.D. Paris, &c.

Gower-street, W.C., Feb. 9th, 1901.

A REALLY CLEVER DOCTOR.

THE following advertisement appeared in a recent issue of the *Morning Post*:—

CAN any Lady RECOMMEND a really Clever DOCTOR, for a Confinement, whose fees are not high, in Chelsea or the immediate neighbourhood?—Address, Doctor, 1594, "Morning Post" Office Strand W.C.

The lady who requires a "really clever doctor" to attend her in her confinement must be under the impression that "real cleverness" in a medical man is as easily detected by the lady who is attended by him as the "real goodness" of a "really good cook" is appreciated by her mistress. She has followed the form which she has been accustomed to use in advertising for her servants so closely, including the proviso as to fees as a substitute for "state wages required," that we wonder she did not add "personal character indispensable" or specify the views as to alcohol and religion which she would prefer in her medical attendant. The answers received should be interesting, but we hope the advertisement will not become a precedent for others.

"MEDICAL SUPERSTITIONS."

To the Editors of THE LANCET.

SIRS,—Your correspondent, "M.B. Lond.," in THE LANCET of Feb. 16th, 1901, p. 524, who is preparing a lecture on Medical Superstitions, should consult: (1) "Folk Medicine," by Black, published by the Folk Lore Society; (2) "Leechdom's Worteunning and Starcraft," by the Rev. Oswald Cockayne, three vols., published under the direction of the Master of the Rolls; (3) Pettigrew, "Superstitions Connected with the Practise of Medicine"; (4) Lady Wilde, "Ancient Cures, Charms, and Usages in Ireland"; (5) Folkard, "Plant Lore Legends and Lyrics"; and (6) Leland, "Gypsy Sorcery."

I am, Sirs, yours faithfully,

Paris, Feb. 19th, 1901. OSCAR JENNINGS.

To the Editors of THE LANCET.

SIRS,—Your correspondent "M.B. Lond.," in THE LANCET of Feb. 16th, p. 524, will find a very interesting, copious, and full account of medical superstitions in different countries in bygone days in "The Origin and Growth of the Healing Art," by Edward Berdoe, 1893, published by Swan Sonnenschein and Co. J. Cordy Jeaffreson, whose death at the age of 70 years was announced in the papers a few days ago, wrote "A Book about Doctors," two vols., published by Hurst and Blackett, which deals briefly with superstition in connexion with the healing art. The *Hull Press* issued "The Doctor in Medicine, Folk-lore, &c.," by William Andrews, in 1896.

I am, Sirs, yours faithfully,

Wivenhoe, Feb. 16th, 1901. WILLIAM H. HEWLETT, M.D.

AN AWKWARD PREDICAMENT.

THE February number of the *Maryland Medical Journal* states that Dr. W. E. Grimm of Patterson Creek, Western Virginia, was arrested in Cumberland on Jan. 3rd and held under bail to await the action of the grand jury upon a charge of practising medicine in Maryland where he is not legally qualified as a practitioner. Dr. Grimm's offence consisted in crossing the boundary line for a distance of some 400 yards to attend the negro labourers quarantined with small-pox at Pinto, Allegany county.

Councillor.—We are of opinion that it is not advisable, or for the public advantage, that the appointments of medical officer of health and public analyst in large districts such as the metropolitan boroughs should be combined in the same person. The science and practice of sanitation are in themselves sufficient to occupy all the time of a medical officer who discharges his duties efficiently, in which case he would be prevented from giving that systematic attention to laboratory work which is essential to the performance of the duties of a public analyst. There are competent officers, we know, who combine both posts, but the combination is nevertheless inadvisable.

Worried.—It is not obligatory upon B to tell C. In our view he has discretion because the receipt of the confidence was not sought by him. He should be guided solely by consideration of what is best for C and D. If the message from the dead can do them no good, can be no solace to them, and may cause pain to either or both of them, our advice to B is that he should remain silent.

M.—Such wholesale dissemination of testimonials may lay our correspondent open to criticism. Copies should be marked "private," and great care should be taken to send them only to members.

C. M. C. (Berkswell).—We recommend that the patient should consult a medical man. If he considers a second opinion necessary he will advise her whom she should consult.

W. T.—Massage is taught at some hospitals as part of the routine training of the nurses, but we do not know which is the best place for the purpose.

Medical Student.—A medical student cannot act as a public vaccinator.

R. C. G.—We do not give medical advice.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (5.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (5.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (25th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—6.30 P.M. Council Meeting. 8 P.M. Casual Communications:—Mr. W. Hern: Some Early Human Skulls.—Mr. H. Ll. Williams: Two Cases of Absorption of Roots. Paper:—Mr. W. L. H. Duckworth: Dental Fragments, probably of the Third Premolars, found in certain Jaws of Man and Animals (illustrated with lantern slides). Adjourned discussion on Mr. T. E. Constant's paper on the Etiology of Superior Protrusion.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. A. Doran: Painless Calculous Pyonephrosis without Fear, Nephrectomy, Recovery.—Dr. A. Lewers: On Fibroids largely involving the Cervix Uteri, with notes of cases.

TUESDAY (26th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Sir Dyce Duckworth and Dr. A. E. Garrod: A Contribution to the Study of Intestinal Sand with notes on a Case in which it was passed.—Mr. A. E. Barker: On Cases Bearing upon the Question of the Limitation of Intercostomy.

WEDNESDAY (27th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8 P.M. Council Meeting. 8.30 P.M. Sir Mitchell Banks: The Neglect of the Actual Cautery in Surgery and its Value in the Treatment of Pruritus Ani. (Second Hunterian Lecture.)

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Informal Exhibition of Cases 5 P.M. Meeting. (The meeting which should have been held on Jan 23rd was, by a unanimous vote of the Council, adjourned as a mark of respect for the memory of her Most Gracious Majesty, Queen Victoria.)

FRIDAY (1st).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith-road, W.).—Clinical Evening.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8 P.M. Special General Meeting to consider the proposed new rule and amendments thereto. 8.45 P.M. Exhibition of Living Cases, Specimens, &c., by Mr. C. Williams, Dr. Wall, Dr. J. Donelan, Dr. Toogood, Dr. Dockrell, and Dr. Henry.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (25th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Vascular and Muscular Mechanisms of the Lung, and the Action of Drugs upon this Organ. (Arris and Gale Lecture.)
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Galloway: Consultation. (Skin.)
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Beddard: Some Points in the Use of Opium.

TUESDAY (26th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. S. J. Sharley: Consultation. (Medical).
ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Dr. A. Macfadyen: The Cell as the Unit of Life.

WEDNESDAY (27th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Vascular and Muscular Mechanisms of the Lung and the Action of Drugs upon this Organ. (Arris and Gale Lecture.)
LONDON THROAT HOSPITAL (204, Gt. Portland street, W.).—5 P.M. Dr. Stoker: Chronic Glandular Disease of the Nose and Nasopharynx. (Post graduate Course.)
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—2–3.30 P.M. Mr. H. Pinch: Class. Clinical Microscopy. 4 P.M. Mr. P. J. Freyer: Consultation. (Surgical.)
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Kidd: Laryngeal Tuberculosis.

THURSDAY (28th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. J. F. J. Sykes: The Influence of the Dwelling upon Health. (Milroy Lecture.)
CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. W. Wingrave: The Nature of Discharges and Douches, with especial reference to Respiratory and Auditory Tracts.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)
THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Kellick: Nævi and their Treatment.
THE HOSPITAL FOR DISEASES OF THE SKIN (Stamford-street, Blackfriars).—3 P.M. Clinical Demonstration:—Dr. P. S. Abraham.
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Beddard: Angina Pectoris.
CHARING CROSS HOSPITAL.—4 P.M. Mr. Wallis: Surgical Cases. (Post graduate Course.)
LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Pathological Demonstration.

FRIDAY (1st).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Vascular and Muscular Mechanisms of the Lung and the Action of Drugs upon this Organ. (Arris and Gale Lecture.)
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Gunn: Consultation. (Eye.)
LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. P. Parkinson: Clinical and Pathological Demonstration.

EDITORIAL NOTICES.

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

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Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1900, which was completed with the issue of Dec. 29th, and the Title-page to the Volume were given in THE LANCET of Jan. 5th.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 21st, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb. 15	30·50	N.	...	168	37	27	Fzn.	31	Cloudy
,, 16	30·42	N.W.	0·01	56	44	30	32	35	Cloudy
,, 17	30·25	N.W.	0·03	65	43	30	41	43	Cloudy
,, 18	30·36	NNE	0·04	45	38	33	35	36	Cloudy
,, 19	30·24	S.W.	0·01	38	36	34	34	34	Snowing
,, 20	30·25	N.E.	0·02	55	37	33	33	35	Overcast
,, 21	30·29	N.	...	43	35	29	Fzn.	32	Foggy

During the week marked copies of the following newspapers have been received:—*Liverpool Mercury, Scotsman, Cardiff Mail, Clapham Observer, Derbyshire Times, Wells Standard, Fife Free Press, Sussex Daily News, Blackburn Weekly Standard, Bradford Argus, Liverpool Daily Post, Norwich News, Surrey Comet, Oldham Standard, Plymouth Mercury, Manchester Courier, Dundee Advertiser, Birmingham Post, Glasgow Herald, York Herald, Darlington Star, East Anglian Daily Times, Ipswich Times, Newcastle Journal, Bristol Mercury, Essex Herald, Citizen, Architect, Times of India, Pioneer Mail, Builder, Yorkshire Post, Leeds Mercury, Baptist, Isle of Ely and Wisbech Advertiser, Reading Mercury, City Press, Local Government Chronicle, Hertfordshire Mercury, Paris Messenger, Isle of Man Times, Coventry Herald, Cheltenham Mercury, Kenilworth Advertiser, Huddersfield Chronicle, Oswestry Advertiser, Literary World, Sunderland Morning Mail, Shields Morning Mail, Ayr Observer, Sydney Bulletin, Madras Standard, British and Colonial Printer, Christian Commonwealth, Local Government Journal, The Age, Westminster Gazette, South-West Suffolk Echo, Woodbridge Reporter, The Star, Oxford Chronicle, Huddington Observer, Carlisle Journal, Bexley Express, Ilkeston Advertiser, Spalding Guardian, Lancaster Standard, Wisbech Standard, East Kent Times, &c., &c.*

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